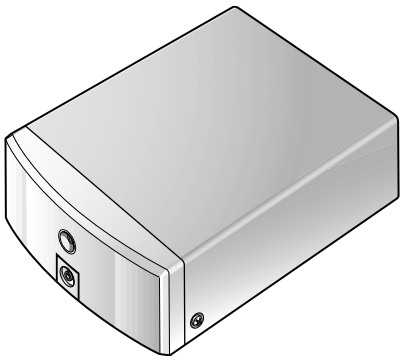
Service Manual



ORDER NO.
RRV2397

STEREO POWER AMPLIFIER

M-NS1

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	The voltage can be converted by the following method.
	M-NS1		
DBD/DF	○	AC110–127V/220–230V/240V	With the voltage selector

- **This product is a system(s) component.**
  This product does not function properly independently ; to avoid malfunctions, be sure to connect it to the prescribed system component(s), otherwise damage may result.
- **Please connect it to the STEREO CD/VCD TUNER XC-NS3V for adjustment and operation inspection.**

Component	Model	Service manual	Remarks
STEREO CD/VCD TUNER	XC-NS3V	RRV2395 (RRV2381)	
STEREO POWER AMPLIFIER	M-NS1	RRV2397 (RRV2321)	This manual.
SPEAKER SYSTEM	S-NS1-LRW	RRV2371	

MINIDISC RECORDER	MJ-NS1	RRV2399 (RRV2363)	

● This service manual should be used together with the following manual(s).

Model No.	Order No.	Remarks
M-F10/MYXJ	RRV2321	

PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
PIONEER ELECTRONICS SERVICE, INC. P.O. Box 1760, Long Beach, CA 90801-1760, U.S.A.
PIONEER EUROPE NV Haven 1087, Keetberglaan 1, 9120 Melsele, Belgium
PIONEER ELECTRONICS ASIACENTRE PTE. LTD. 253 Alexandra Road, #04-01, Singapore 159936
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T–ZZA OCT. 2000 Printed in Japan

1. CONTRAST OF MISCELLANEOUS PARTS

NOTES :
- *Parts marked by " NSP " are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screws adjacent to ▼ mark on the product are used for disassembly.*
- *Reference Nos. indicate the pages and Nos. in the service manual for the base model.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 *When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).*

560 Ω → 56 × 10 [1] → 561 ..... RD1/4PU 5 6 1 J
47k Ω → 47 × 10 [3] → 473 ..... RD1/4PU 4 7 3 J
0.5 Ω → R50 ..... RN2H R 5 0 K
1 Ω → 1R0 ..... RS1P 1 R 0 K

Ex. 2 *When there are 3 effective digits (such as in high precision metal film resistors).*

5.62k Ω → 562 × 10 [1] → 5621 ..... RN1/4PC 5 6 2 1 F

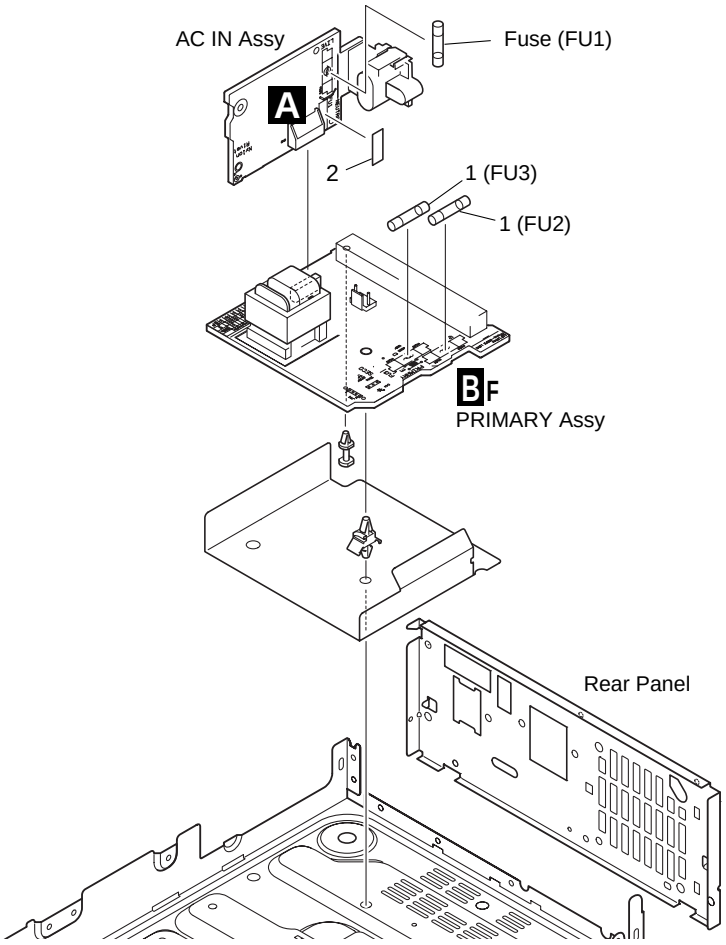
■ CONTRAST TABLE

M-NS1/DBD/DF and M-F10/MYXJ are constructed the same except for the following:

Ref. No.	Mark	Symbol and Description	Part No.		Remarks
			M-F10/MYXJ	M-NS1/DBD/DF	
		PCB ASSEMBLIES			
	NSP	AMP MAIN Assy	AWM7499	AWM7525	
P6–2		└ PRIMARY Assy	AWU7557	AWU7611	
		PACKING			
P4–1		Paper Pattern	AAX7807	Not used	
P4–2		System Cable (20P)	ADE7057	Not used	
P4–3	⚠	AC Power Cord	ADG1154	Not used	
P4–5		FM Wire Antenna	ADH7005	Not used	
P4–6		Operating Instructions (Dutch/Swedish/Spanish/Portuguese)	ARC7301	Not used	
P4–7		Operating Instructions (English/French/German/Italian)	ARE7264	Not used	
P4–9	NSP	Warranty Card	ARY7022	Not used	
P4–10		AM Loop Antenna	ATB7009	Not used	
P4–11		Ferrite Core	ATX7007	Not used	
P4–12		Remote Control Unit	AXD7271	Not used	
P4–14		Stand A	AXG7096	Not used	
P4–15		Stand B	AXG7097	Not used	
P4–16	⚠NSP	Lithium Battery (CR2025)	VEM1009	Not used	
P4–17		Vinyl Bag (115 × 270 × 0.05)	Z21–013	Not used	
P4–18	NSP	Polyethylene Bag (0.03 × 230 × 340)	Z21–038	Not used	
P4–21		Spacer A	AHB7037	Not used	
P4–22		Packing Case	AHD7941	AHD7951	
		EXTERIOR			
P6–7	⚠	Power Transformer (T1)	ATS7278	ATS7282	
P6–8	⚠	Fuse (FU1)	REK1025 (T2AL250V)	REK1028 (T4AL250V)	
	⚠	Fuse (T2AL250V, FU2, FU3)	Not used	REK1025	No. 1
P6–10		Rear Panel	ANC7935	ANC7936	
P6–28	NSP	Label	ARW7101	Not used	
		Name Label	Not used	AAL7273	
P6–29		Caution Label	ARW7112	ARW7114	
P6–36	NSP	Fuse Card	Not used	AAX7099	No. 2

Notes: The numbers in the remarks column correspond to the numbers on the " EXPLODED VIEWS ".

■ EXPLODED VIEWS



■ CONTRAST OF PCB ASSEMBLIES

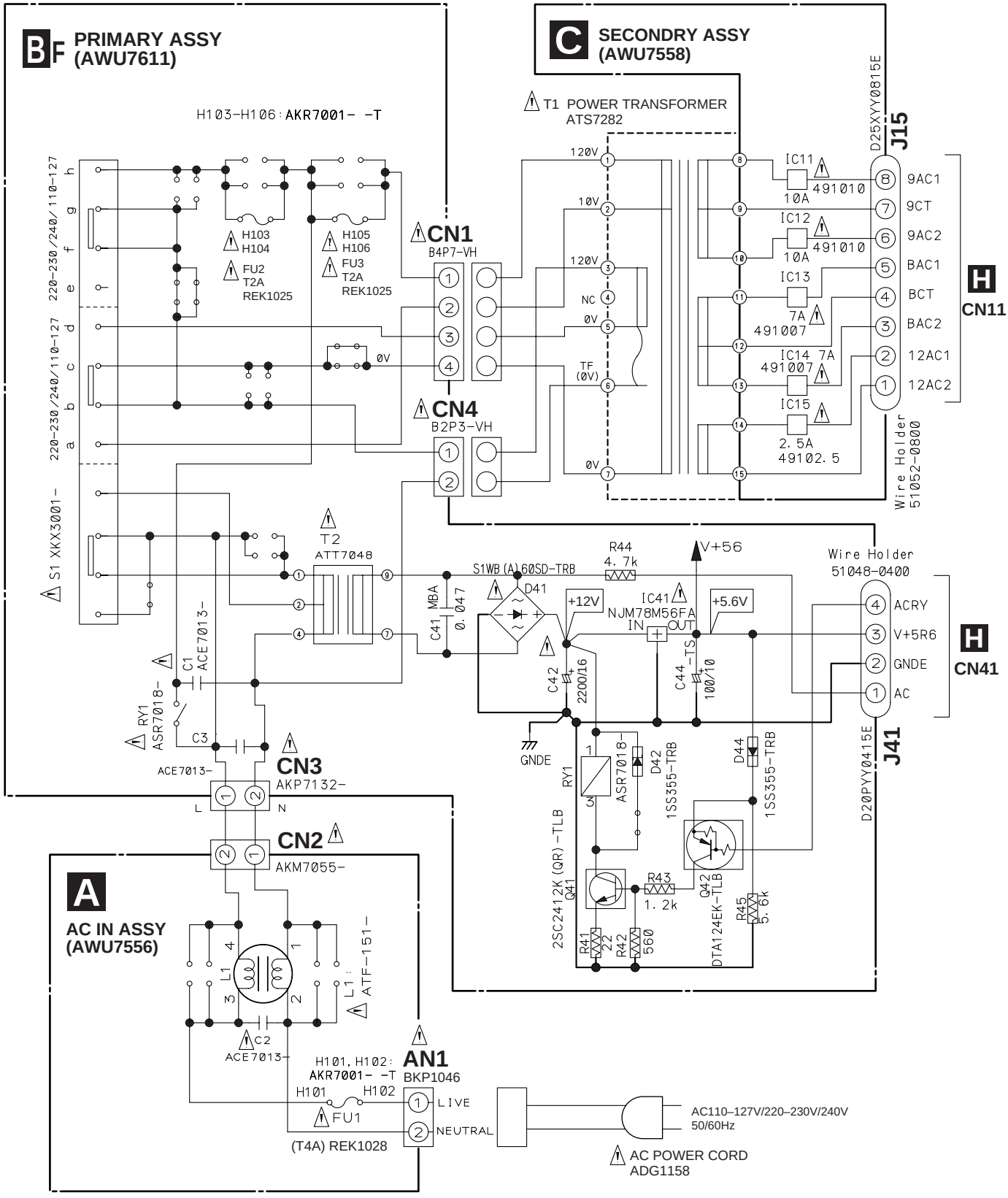
BF PRIMARY Assy

AWU7611 and AWU7557 are constructed the same except for the following:

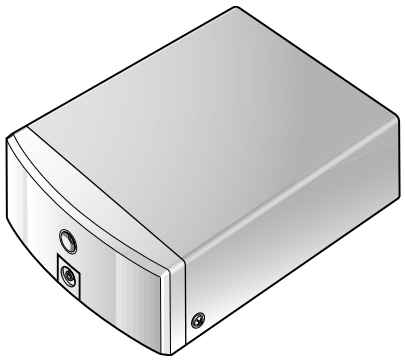
Mark	Symbol and Description	Part No.		Remarks
		AWU7557	AWU7611	
⚠	S1	Not used	XKX3001	∗1
⚠	T2	ATT7050	ATT7048	
⚠	CN1	Not used	B4P7–VH	∗1
⚠	H103–H106	Not used	AKR7001	∗1

∗1: Refer to " SCHEMATIC DIAGRAM ".

■ SCHEMATIC DIAGRAM



Service Manual



ORDER NO.
RRV2321

STEREO POWER AMPLIFIER

M-F10

THIS MANUAL IS APPLICABLE TO THE FOLLOWING MODEL(S) AND TYPE(S).

Type	Model	Power Requirement	Remarks
	M-F10		
MYXJ	○	AC220–230V	
NVXJ	○	AC230V	
KUXJ/CA	○	AC120V	

- **This product is a system(s) component.**
  This product does not function properly independently ; to avoid malfunctions, be sure to connect it to the prescribed system component(s), otherwise damage may result.
- **Please connect it to the STEREO CD TUNER XC-F10, for adjustment and operation inspection.**

Component	Model	Service manual	Remarks
STEREO CD TUNER	XC-F10	RRV2319 (ZVYXJ type) RRV2341 (ZUXJ/CA type)	
STEREO POWER AMPLIFIER	M-F10	RRV2321	This manual.
SPEAKER SYSTEM	S-F10-LRW	RRV2330 (XMD/EW type) RRV2346 (XMD/UC type)	
STEREO CASSETTE DECK	CT-F10	RRV2308	

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PIONEER CORPORATION 4-1, Meguro 1-chome, Meguro-ku, Tokyo 153-8654, Japan
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T–ZZA JUNE 2000 Printed in Japan

1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual.
Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

WARNING
This product contains lead in solder and certain electrical parts contain chemicals which are known to the state of California to cause cancer, birth defects or other reproductive harm.

Health & Safety Code Section 25249.6 – Proposition 65

NOTICE
(FOR CANADIAN MODEL ONLY)
Fuse symbols (fast operating fuse) and/or (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

REMARQUE
(POUR MODÈLE CANADIEN SEULEMENT)
Les symboles de fusible (fusible de type rapide) et/ou (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

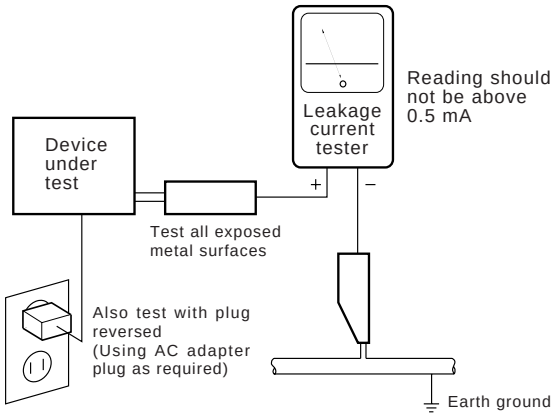
(FOR USA MODEL ONLY)

1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60 Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5 mA.


Leakage current tester
Reading should not be above 0.5 mA
Device under test
+
–
Test all exposed metal surfaces
Also test with plug reversed (Using AC adapter plug as required)
Earth ground

AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage , etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a ⚠ on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

LITHIUM BATTERY NOTICE

WARNING!

Lithium batteries. Danger of explosion. Replacement must be done by qualified personnel and only by following the instructions given in the service manual.

ADVARSEL!

Lithiumbatteri – Eksplosionsfare ved fejlagtig håndtering. Udskiftning må kun ske med batteri af samme fabrikat og type. Levér det brugte batteri tilbage til leverandøren.

This warning is stated on the product or in the operating instructions.
When replacing the lithium batteries, follow the note below.
Dispose of the used battery promptly. Keep away from children. Do not disassemble and do not dispose of in fire.
The battery used in this device may present a fire or chemical hazard if mistreated. Do not recharge, disassemble, heat above 100 ˚C or incinerate. Replace only with the same Part Number. Use of another battery may present a risk of fire or explosion.

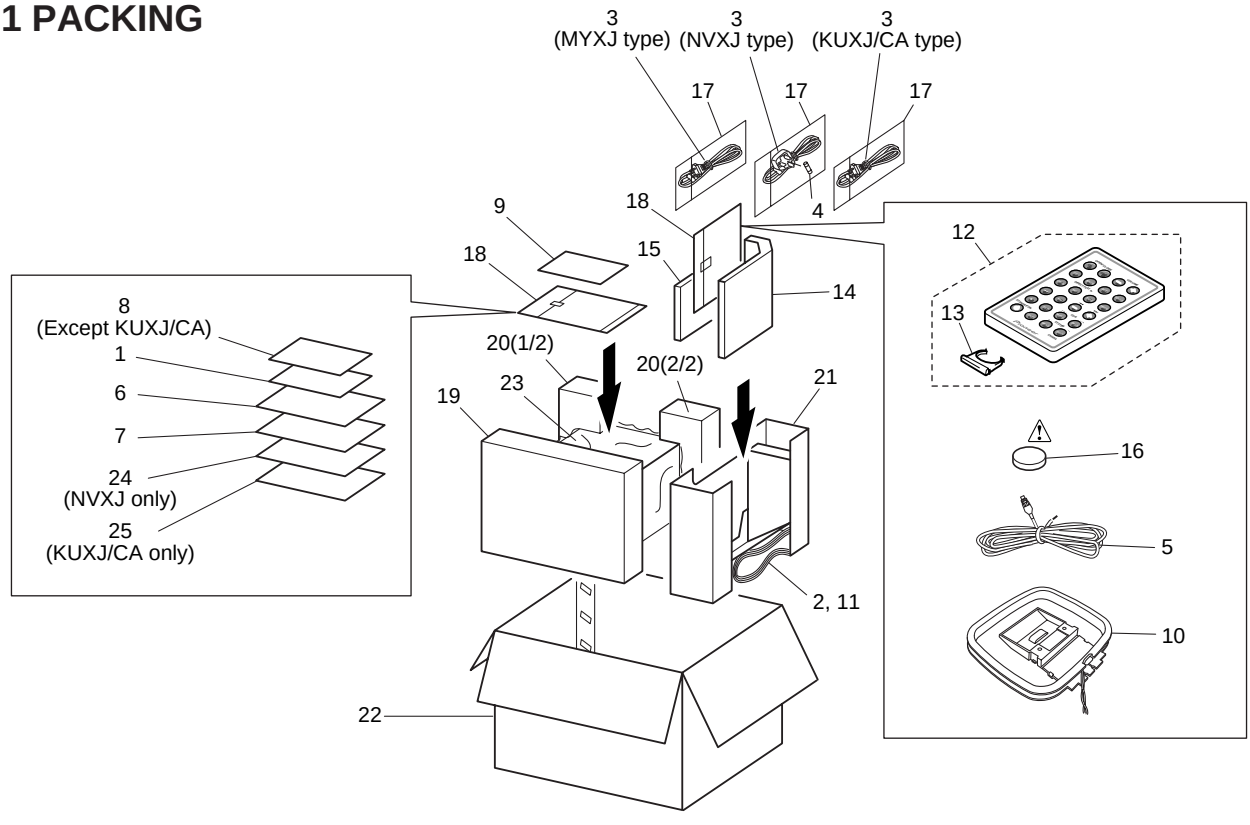
Note: The lithium battery installation position is shown in the exploded views.

Denne advarsel or angivet på produktet eller i brugsvejledningen.
Ved udskiftning af lithium batterierne følges nedenstående anveisning.
Batterierne må kun udskiftes med batterier af samme type og mærke.

2. EXPLODED VIEWS AND PARTS LIST

NOTES :
- *Parts marked by " NSP " are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *Screw adjacent to ▼ mark on the product are used for disassembly.*

2.1 PACKING



(1) PACKING PARTS LIST

Mark	No.	Description	Part No.
	1	Paper Pattern	AAX7807
	2	System Cable (20P)	ADE7057
⚠	3	AC Power Cord	See Contrast table (2)
⚠	4	Fuse (T5A)	See Contrast table (2)
	5	FM Wire Antenna	See Contrast table (2)
	6	Operating Instructions	See Contrast table (2)
	7	Operating Instructions	See Contrast table (2)
	8	Errata	See Contrast table (2)
NSP	9	Warranty Card	See Contrast table (2)
	10	Loop Antenna	ATB7009
	11	Ferrite Core	ATX7007
	12	Remote control Unit	AXD7271
	13	Battery Lid	AZN7834
	14	Stand A	AXG7096
	15	Stand B	AXG7097
NSP ⚠	16	Lithium Battery (CR2025)	VEM1009
	17	Vinyl Bag (115 × 270 × 0.05)	Z21–013
NSP	18	Polyethylene Bag (0.03 × 230 × 340)	Z21–038
	19	Front Pad A	AHA7293
	20	Rear Pad A	AHA7294
	21	Spacer A	AHB7037
	22	Packing Case	See Contrast table (2)
	23	Sheet	Z23–026
	24	Operating Instructions	See Contrast table (2)
	25	Operating Instructions	See Contrast table (2)

(2) CONTRAST TABLE

MYXJ, NVXJ and KUXJ/CA are constructed the same except for the following:

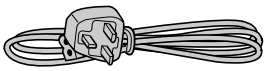
Mark	No.	Symbol and Description	Part No.			Remarks
			MYXJ type	NVXJ type	KUXJ/CA type	
⚠	3	AC Power Cord	ADG1154	ADG1156	ADG7022	
⚠	4	Fuse (T5A)	Not used	AEK7001	Not used	
	5	FM Wire Antenna	ADH7005	ADH7005	ADH7004	
	6	Operating Instructions (Dutch/Swedish/Spanish/Portuguese)	ARC7301	Not used	Not used	
	7	Operating Instructions (English/French/German/Italian)	ARE7264	Not used	Not used	
	8	Errata	ARX7037	ARX7037	Not used	
NSP	9	Warranty Card	ARY7022	ARY7022	ARY7045	
	22	Packing Case	AHD7941	AHD7942	AHD7905	
	24	Operating Instructions (English)	Not used	ARB7227	Not used	
	25	Operating Instructions (English/French)	Not used	Not used	ARE7256	

ACCESSORIES

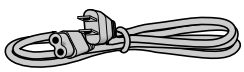
Remote control unit
(AXD7271)

⚠ Lithium battery
(CR2025)

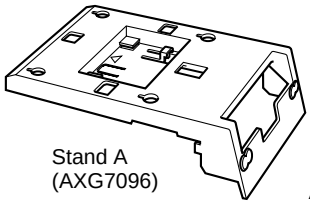
AC power cord
(ADG1154)
(For MYXJ type)



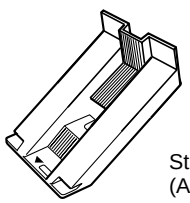
AC power cord
(ADG1156)
(For NVXJ type)



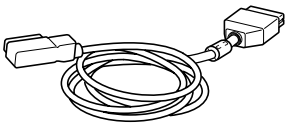
AC power cord
(ADG7022)
(For KUXJ/CA type)



Stand A
(AXG7096)

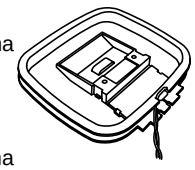


Stand B
(AXG7097)

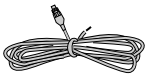


System cable (ADE7057)

AM loop antenna
(ATB7009)

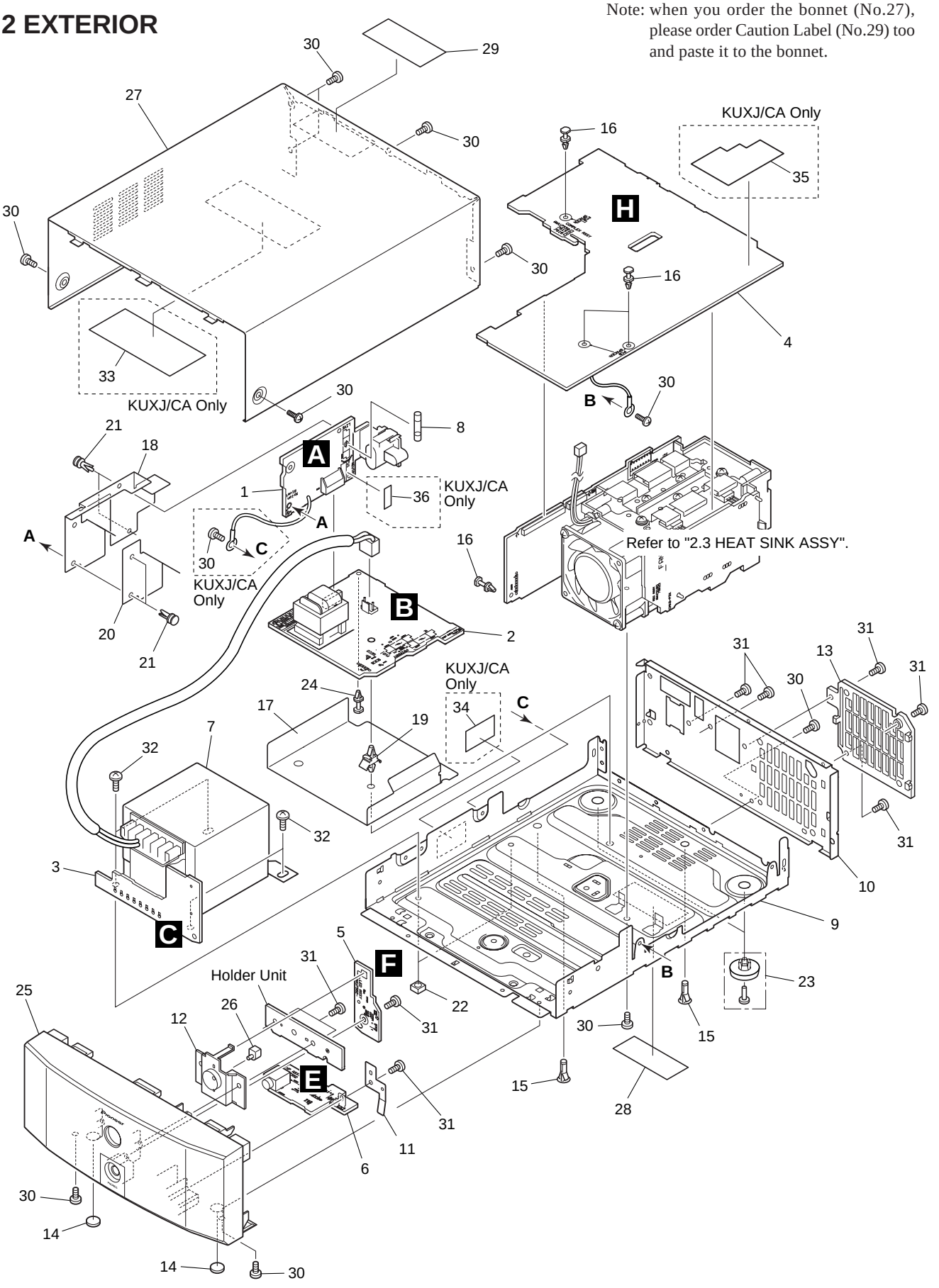


FM wire antenna
(ADH7005: For MYXJ and NVXJ types)
(ADH7004: For KUXJ/CA type)



2.2 EXTERIOR

Note: when you order the bonnet (No.27), please order Caution Label (No.29) too and paste it to the bonnet.



(1) EXTERIOR SECTION PARTS LIST

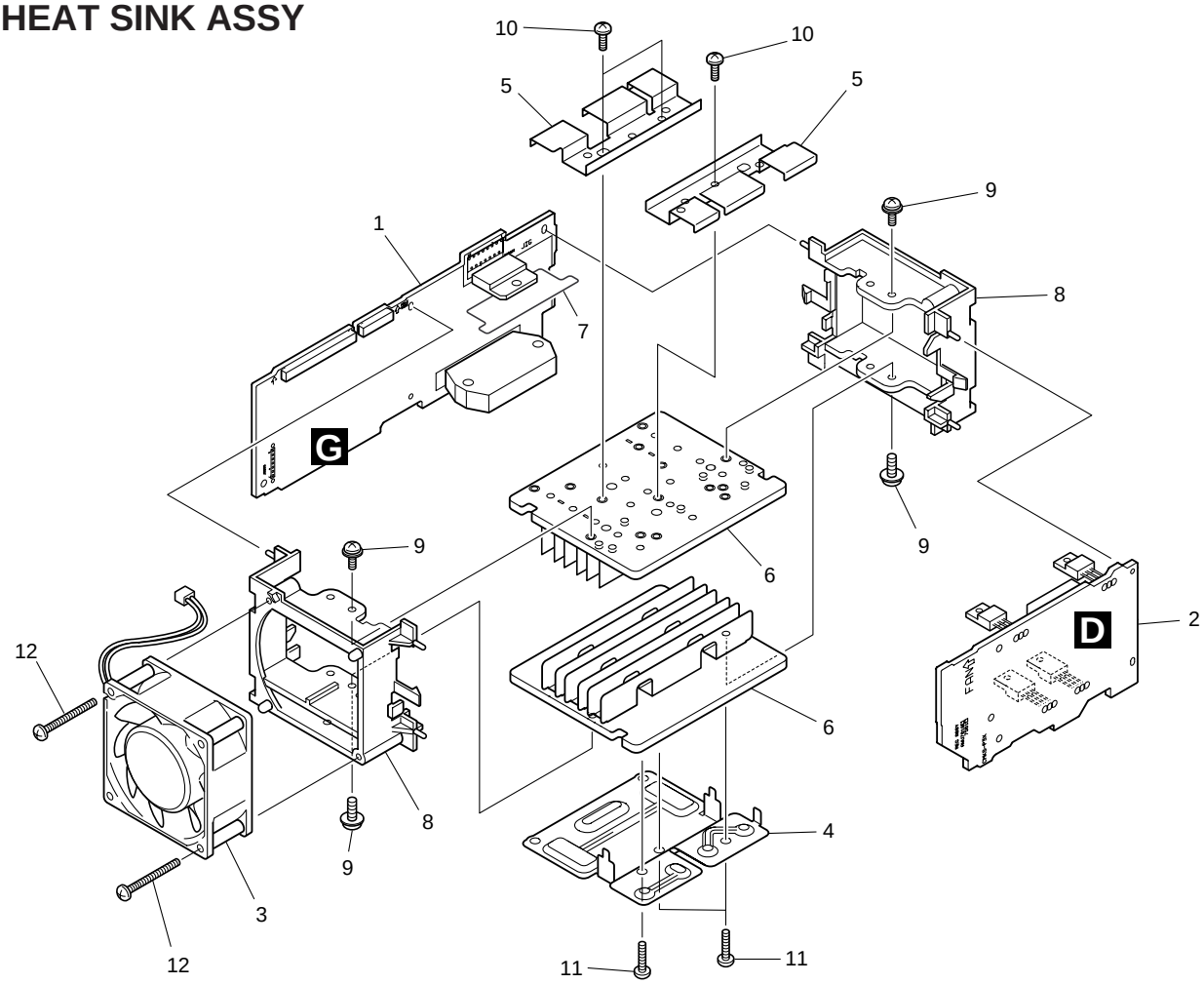
Mark	No.	Description	Part No.
	1	AC IN Assy	See Contrast table (2)
	2	PRIMARY Assy	See Contrast table (2)
	3	SECONDRY Assy	See Contrast table (2)
	4	COMPLEX Assy	See Contrast table (2)
	5	LED Assy	AWU7562
	6	HP Assy	AWU7563
⚠	7	Power Transformer (T1)	See Contrast table (2)
⚠	8	Fuse (FU1)	See Contrast table (2)
NSP	9	Chassis	ANA7110
	10	Rear Panel	See Contrast table (2)
	11	Erath Plate	ANG7331
	12	Lens Bracket	AAK7766
	13	Rear Mold	AAX7803
	14	Leg	AEB7090
NSP	15	PCB Holder	AEC7057
NSP	16	PCB Spacer (3×6)	AEC7156
	17	Bottom Barrier	AEC7283
	18	Side Barrier	AEC7285
NSP	19	PCB Spacer	AEC7289
	20	Sub Barrier	AEC7312
	21	Nylon Rivet	AEC7315
	22	Disc Guard	PNM1245
	23	Foot (Rubber)	REC-434
NSP	24	Card Spacer	REC1156
	25	Front Panel	AMB7702
	26	LED Lens	PNW2019
	27	Bonnet	AZN7837
NSP	28	Label	See Contrast table (2)
	29	Caution Label	See Contrast table (2)
	30	Screw	BBZ30P080FNI
	31	Screw	BPZ30P100FZK
	32	Screw	FBT40P060FCC
	33	65 Label	See Contrast table (2)
NSP	34	Fuse Caution	See Contrast table (2)
NSP	35	Fuse Caution B	See Contrast table (2)
NSP	36	Fuse Card	See Contrast table (2)

(2) CONTRAST TABLE

MYXJ, NVXJ and KUXJ/CA are constructed the same except for the following:

Mark	No.	Symbol and Description	Part No.			Remarks
			MYXJ type	NVXJ type	KUXJ/CA type	
	1	AC IN Assy	AWU7556	AWU7556	AWU7609	
	2	PRIMARY Assy	AWU7557	AWU7557	AWU7658	
	3	SECONDRY Assy	AWU7558	AWU7558	AWU7614	
	4	COMPLEX Assy	AWU7559	AWU7559	AWU7616	
⚠	7	Power Transformer (T1)	ATS7278	ATS7278	ATS7279	
⚠	8	Fuse (FU1)	REK1025 (T2AL250V)	REK1025 (T2AL250V)	REK1066 (4A/125V)	
	10	Rear Panel	ANC7935	ANC7935	ANC7967	
NSP	28	Label	ARW7101	ARW7107	ARW7103	
	29	Caution Label	ARW7112	ARW7112	ARW7113	
	33	65 Label	Not used	Not used	ARW7050	
NSP	34	Fuse Caution	Not used	Not used	AAX7817	
NSP	35	Fuse Caution B	Not used	Not used	AAX7833	
NSP	36	Caution Card	Not used	Not used	AAX2343	

2.3 HEAT SINK ASSY



(1) HEAT SINK ASSY SECTION PARTS LIST

Mark	No.	Description	Part No.
	1	AMP Assy	AWU7560
	2	REG Assy	AWU7561
	3	DC Fan Motor	AXM7014
	4	Power Pac Holder	ANG7109
	5	Heat Plate	ANG7328
	6	Heat Sink	ANH7132
	7	Mica Sheet	AEE7036
	8	Fan Mold	AMR7321
	9	Screw	ABA1021
	10	Screw	BBZ30P080FNI
	11	Screw	BBZ30P160FMC
	12	Screw	BPZ30P350FZK

(2) CONTRAST TABLE

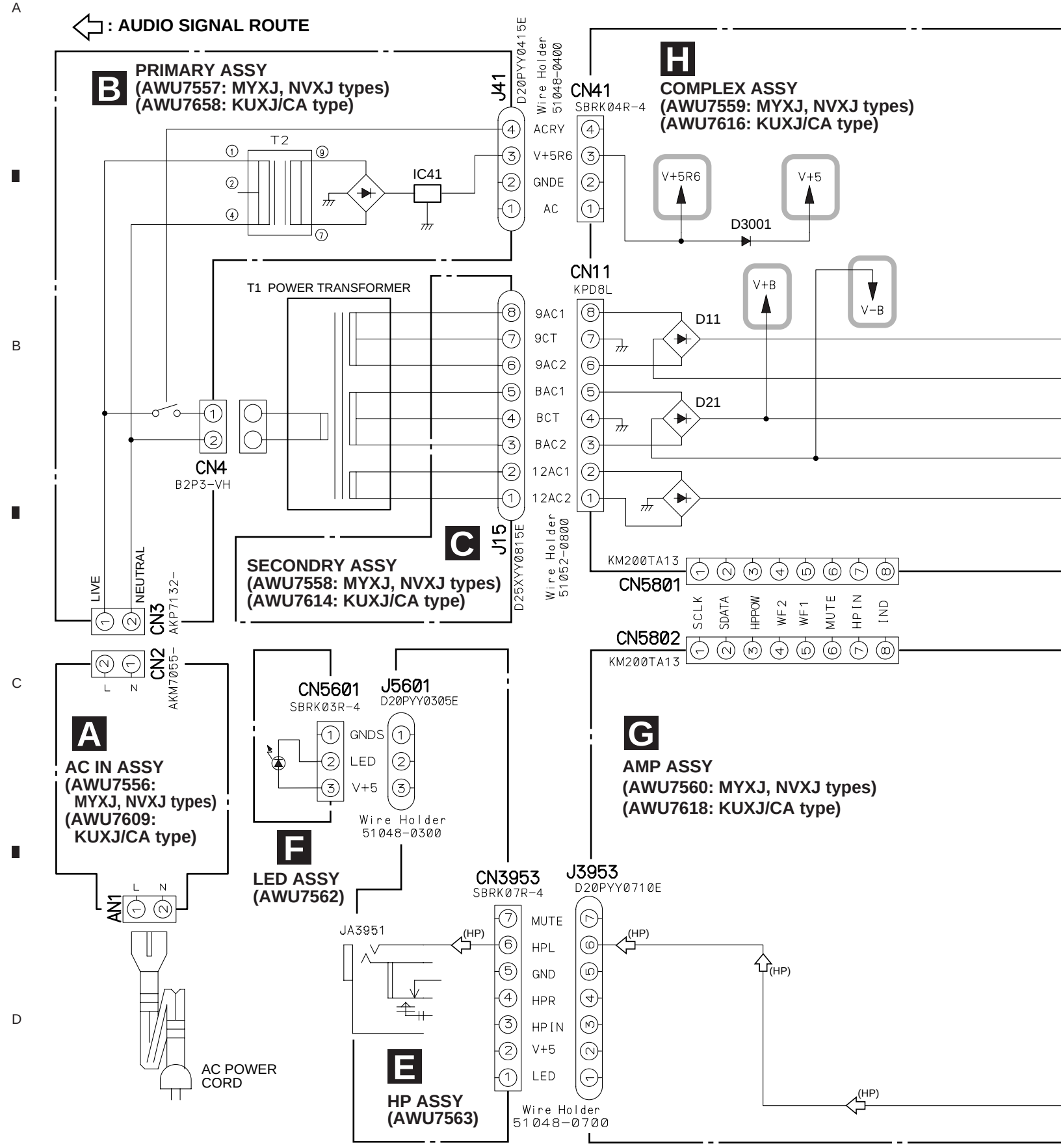
MYXJ, NVXJ and KUXJ/CA are constructed the same except for the following:

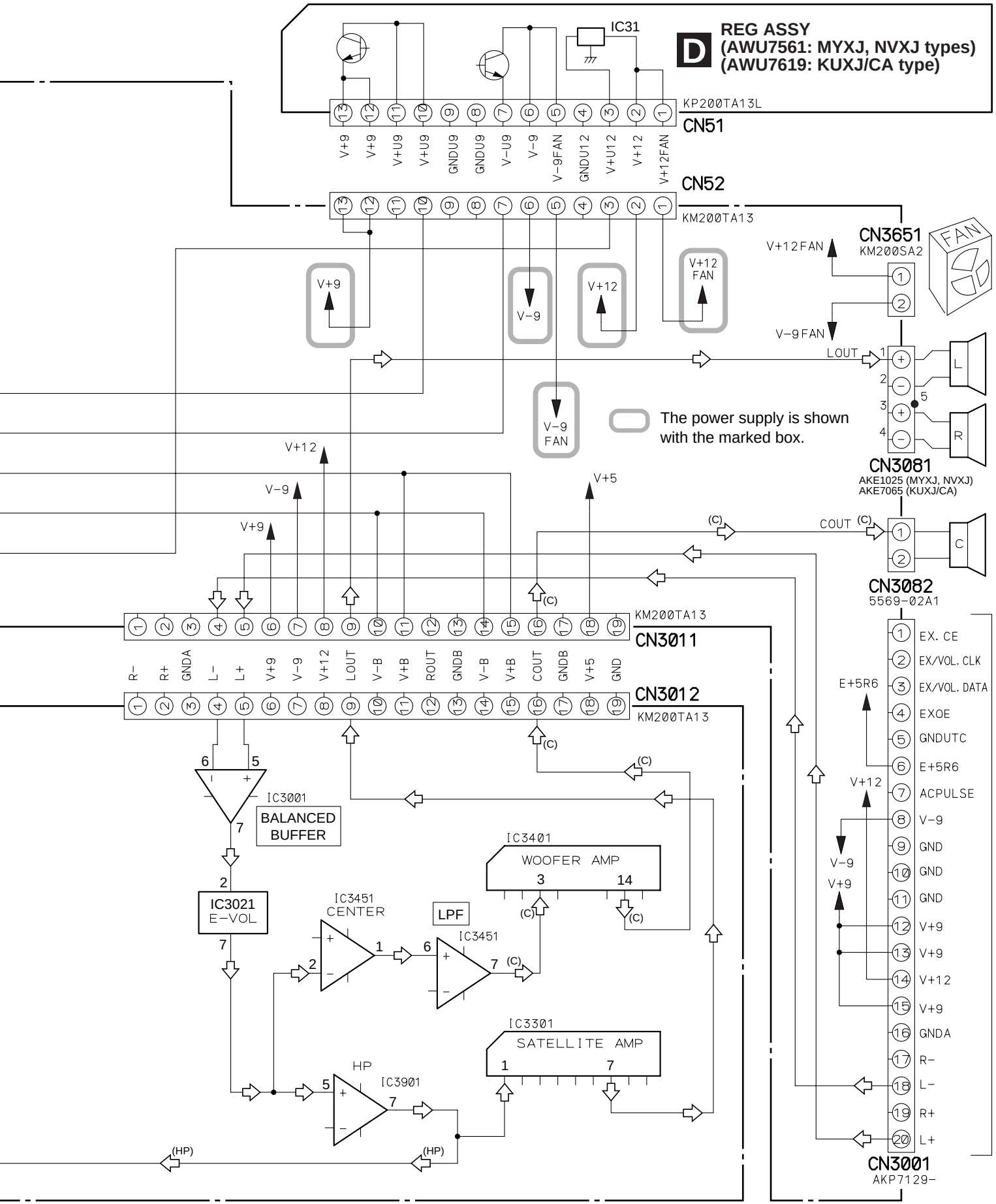
Mark	No.	Symbol and Description	Part No.			Remarks
			MYXJ type	NVXJ type	KUXJ/CA type	
	1	AMP Assy	AWU7560	AWU7560	AWU7618	
	2	REG Assy	AWU7561	AWU7561	AWU7619	

3. BLOCK DIAGRAM AND SCHEMATIC DIAGRAM

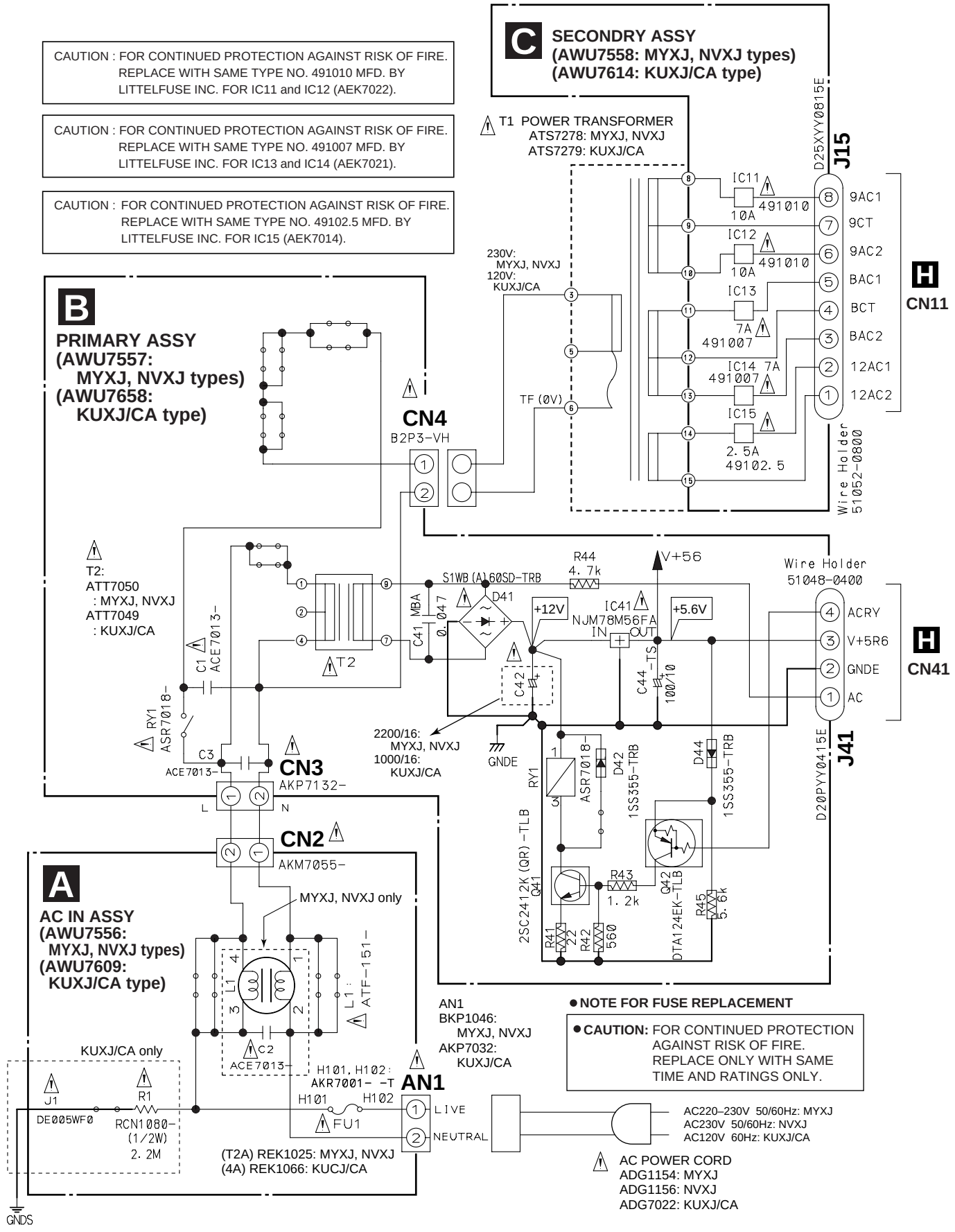
Note: When ordering service parts, be sure to refer to "EXPLODED VIEWS AND PARTS LIST" or "PCB PARTS LIST".

3.1 BLOCK DIAGRAM and OVERALL CONNECTION DIAGRAM

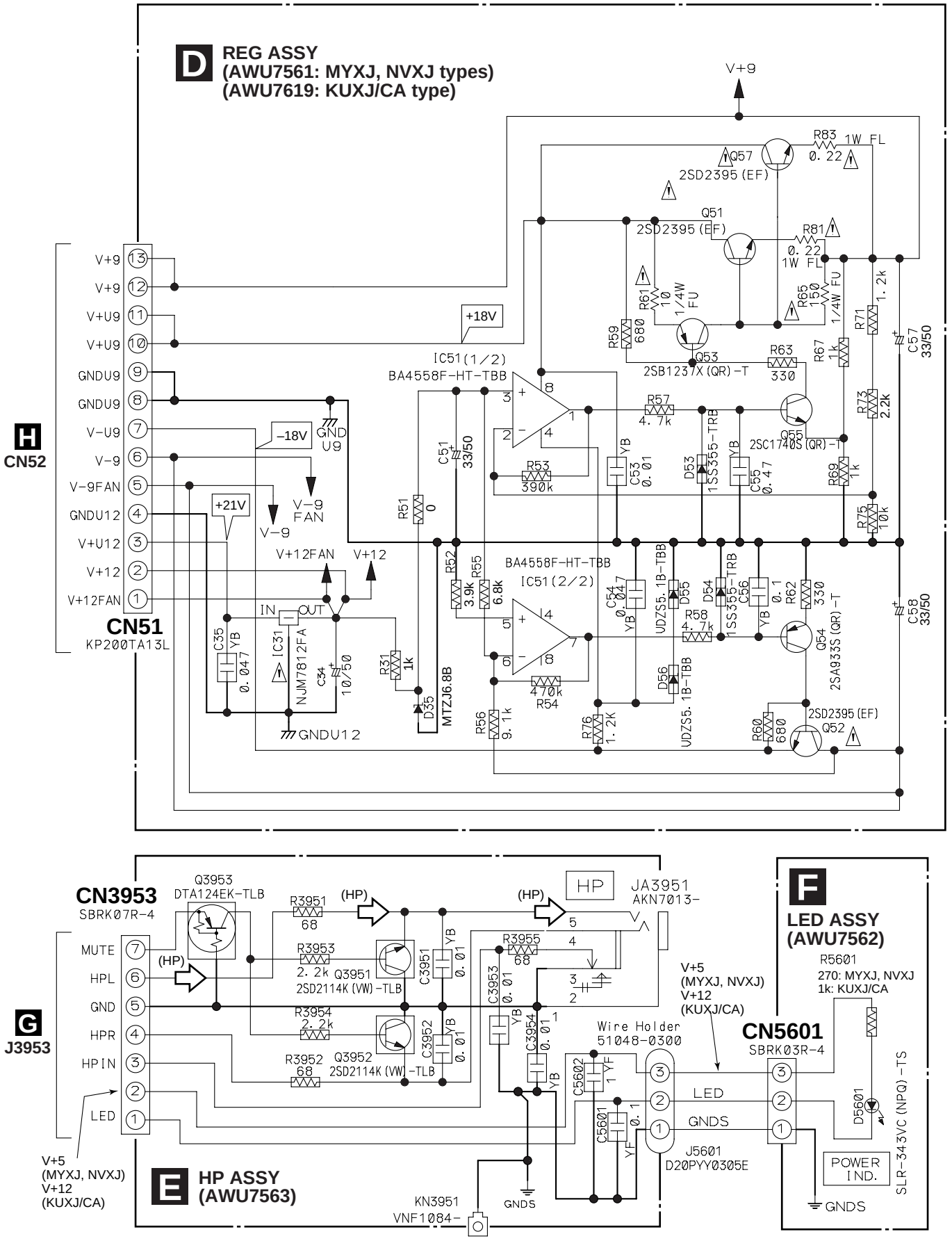



D
REG ASSY
(AWU7561: MYXJ, NVXJ types)
(AWU7619: KUXJ/CA type)
IC31
KP200TA13L
CN51
V+9
V+9
V+U9
V+U9
GNDU9
GNDU9
V-U9
V-9
V-9FAN
GNDU12
V+U12
V+12
V+12FAN
CN52
KM200TA13
CN3651
KM200SA2
FAN
V+12FAN
V-9FAN
V+9
V-9
V+12
V+12 FAN
V-9 FAN
LOUT
L
R
CN3081
AKE1025 (MYXJ, NVXJ)
AKE7065 (KUXJ/CA)
The power supply is shown with the marked box.
V+12
V-9
V+9
V+5
(C)
COUT
C
CN3082
5569-02A1
KM200TA13
CN3011
R-
R+
GNDA
L-
L+
V+9
V-9
V+12
LOUT
V-B
V+B
ROUT
GNDB
V-B
V+B
COUT
GNDB
V+5
GND
CN3012
KM200TA13
IC3001
BALANCED BUFFER
IC3021
E-VOL
IC3401
WOOFER AMP
IC3451
CENTER
LPF
IC3451
IC3301
SATELLITE AMP
HP
IC3901
(HP)
EX. CE
EX/VOL. CLK
EX/VOL. DATA
EXOE
GNDUTC
E+5R6
ACPULSE
V-9
GND
GND
GND
V+9
V+9
V+12
V+9
GNDA
R-
L-
R+
L+
E+5R6
V+12
V-9
V+9
CN3001
AKP7129-
To STEREO CD TUNER XC-F10

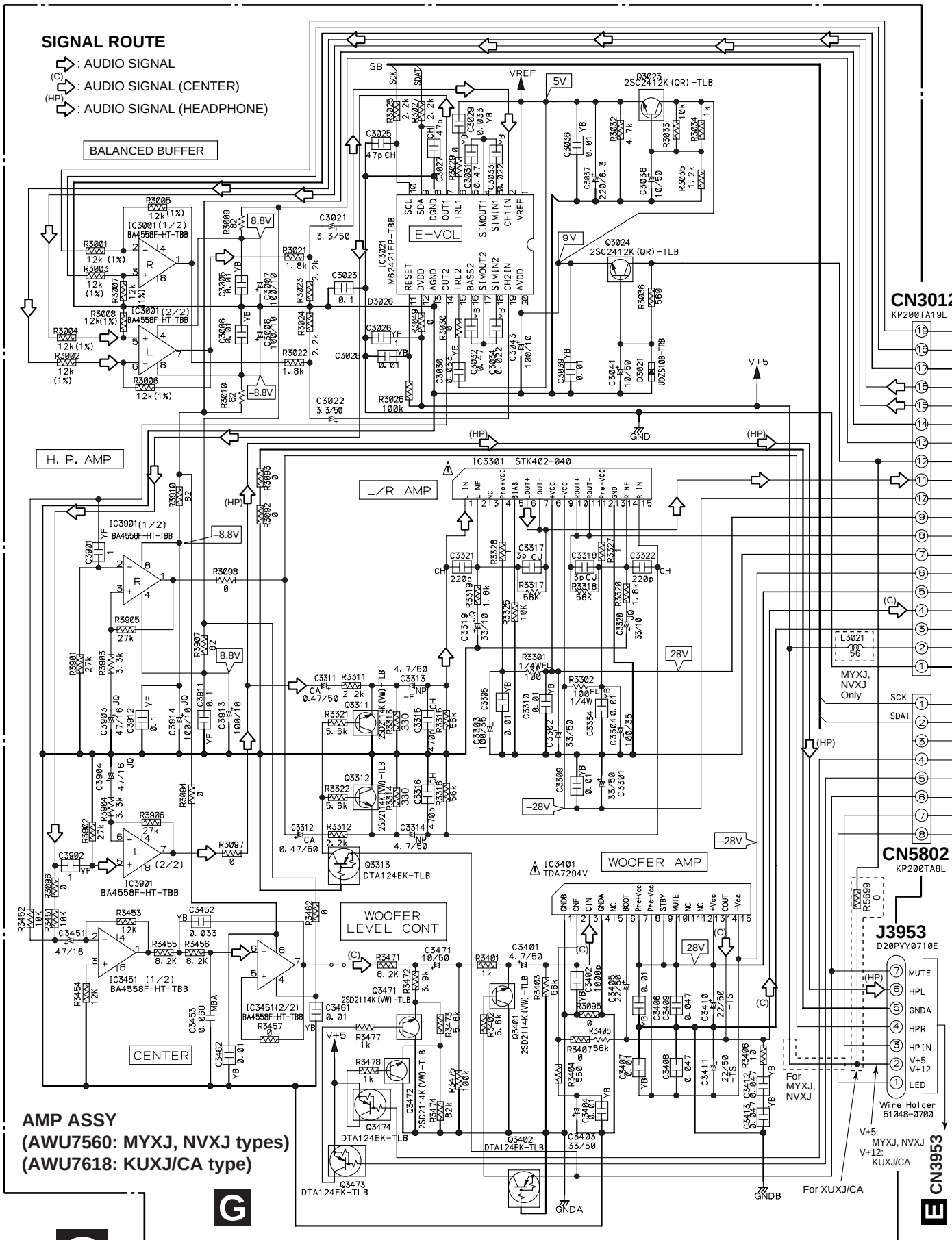
3.2 AC IN, PRIMARY and SECONDRY ASSYS

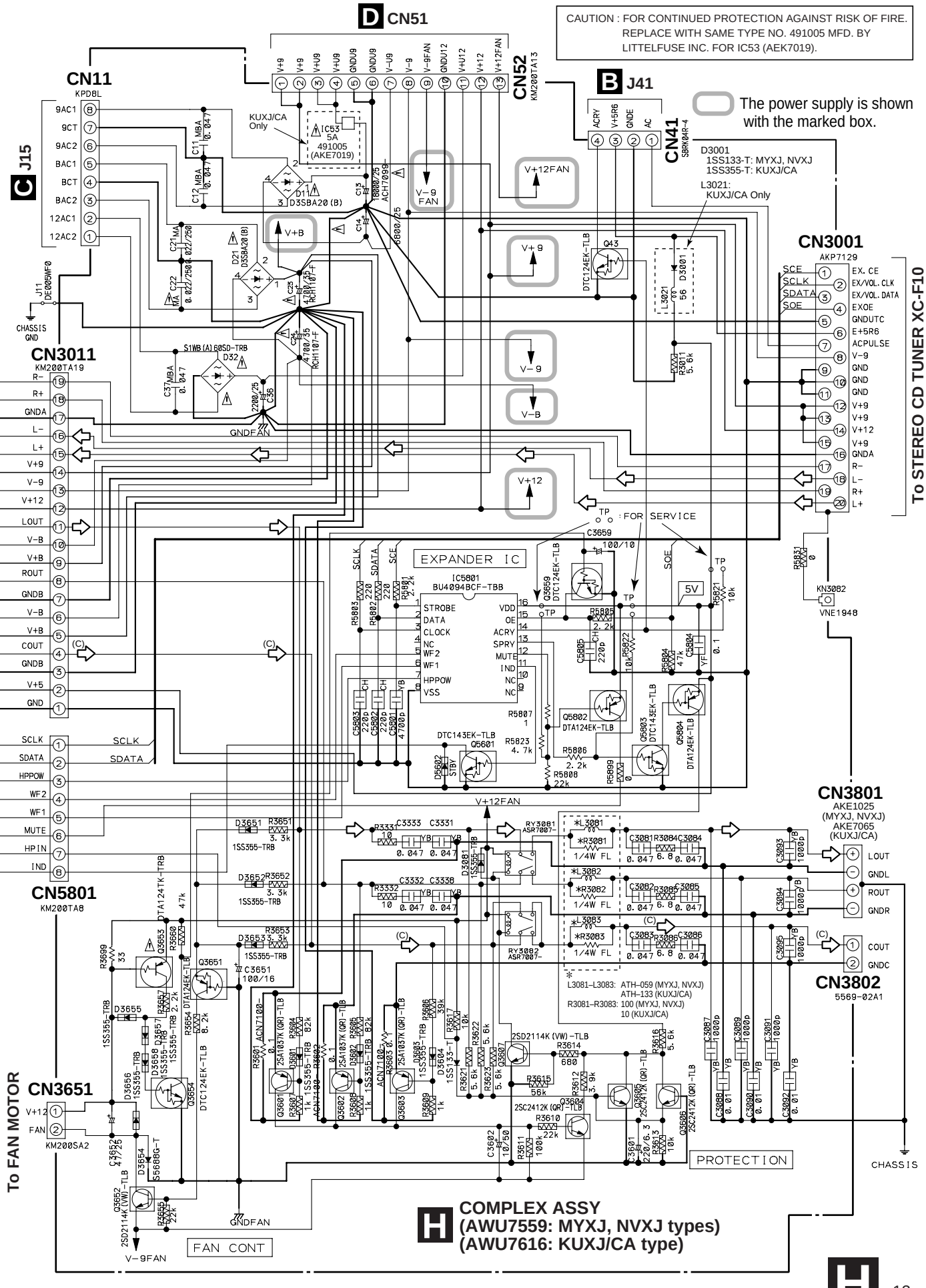


3.3 REG, HP and LED ASSYS



3.4 AMP and COMPLEX ASSYS




CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE. REPLACE WITH SAME TYPE NO. 491005 MFD. BY LITTELFUSE INC. FOR IC53 (AEK7019).
The power supply is shown with the marked box.
D CN51
CN52 KM200TA13
B J41
CN41 SBRK04R-4
C J15
CN11 KPD8L
CN3001 AKP7129
To STEREO CD TUNER XC-F10
CN3011 KM200TA19
CN5801 KM200TA8
CN3651 KM200SA2
To FAN MOTOR
CN3801 AKE1025 (MYXJ, NVXJ) AKE7065 (KUXJ/CA)
CN3802 5569-02A1
KUXJ/CA Only
IC53 5A 491005 (AKE7019)
D3001 1SS133-T: MYXJ, NVXJ 1SS355-T: KUXJ/CA
L3021: KUXJ/CA Only
EXPANDER IC
IC5801 BU4094BCF-TBB
: FOR SERVICE
L3081–L3083: ATH–059 (MYXJ, NVXJ) ATH–133 (KUXJ/CA)
R3081–R3083: 100 (MYXJ, NVXJ) 10 (KUXJ/CA)
PROTECTION
FAN CONT
CHASSIS
COMPLEX ASSY
(AWU7559: MYXJ, NVXJ types)
(AWU7616: KUXJ/CA type)

4. PCB CONNECTION DIAGRAM

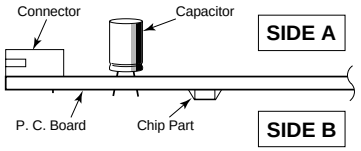
NOTE FOR PCB DIAGRAMS:

1. Part numbers in PCB diagrams match those in the schematic diagrams.
2. A comparison between the main parts of PCB and schematic diagrams is shown below.

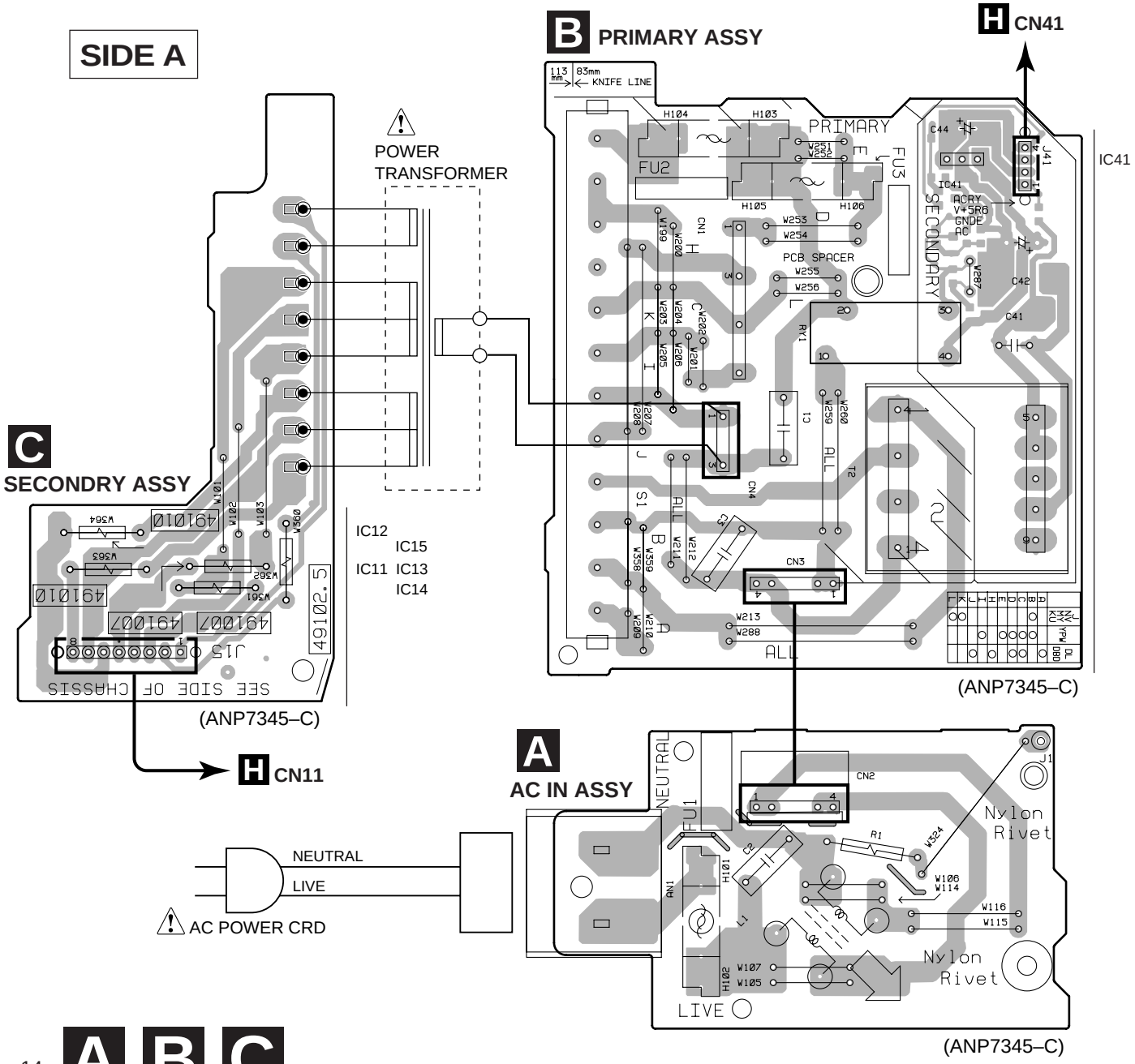
Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
B C E	B C E B C E	Transistor
B C E	B C E B C E	Transistor with resistor
D G S	D G S D G S	Field effect transistor

Symbol in PCB Diagrams	Symbol in Schematic Diagrams	Part Name
		Resistor array
		3-terminal regulator

3. The parts mounted on this PCB include all necessary parts for several destination.
   For further information for respective destinations, be sure to check with the schematic diagram.
4. Viewpoint of PCB diagrams

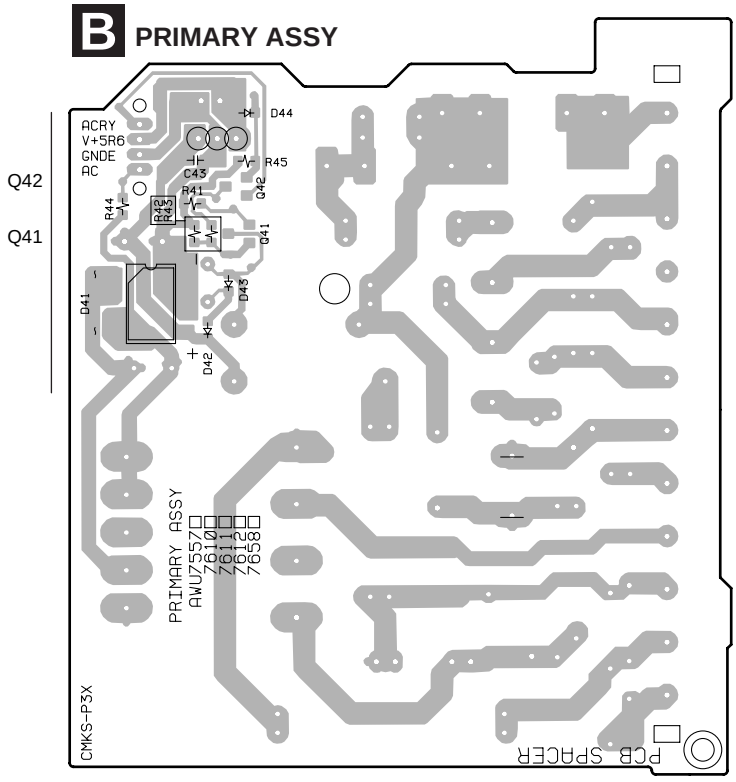


4.1 AC IN, PRIMARY and SECONDRY ASSYS



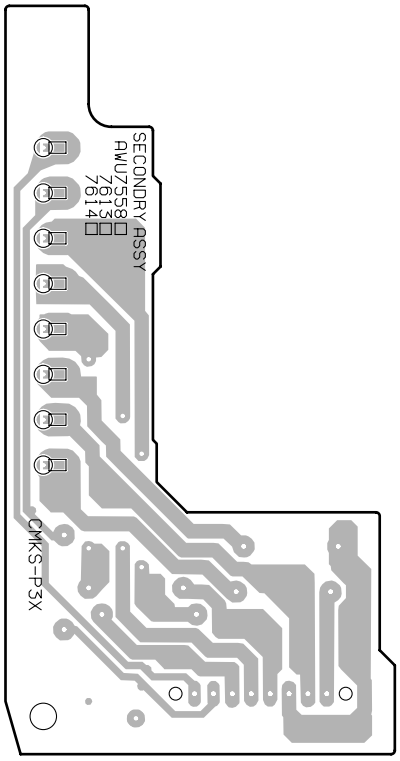
SIDE B

B PRIMARY ASSY



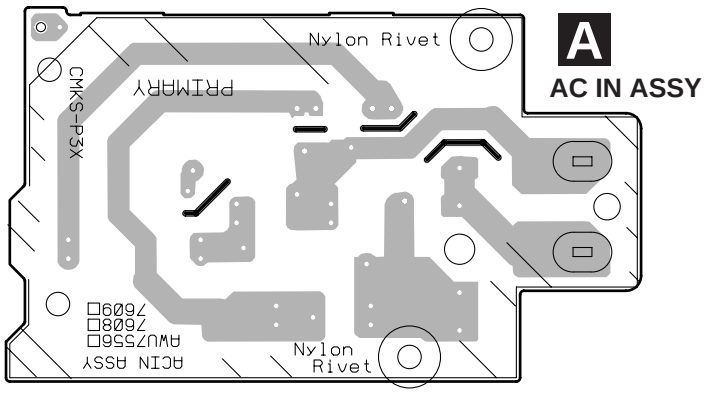
(ANP7345–C)

C SECONDRY ASSY



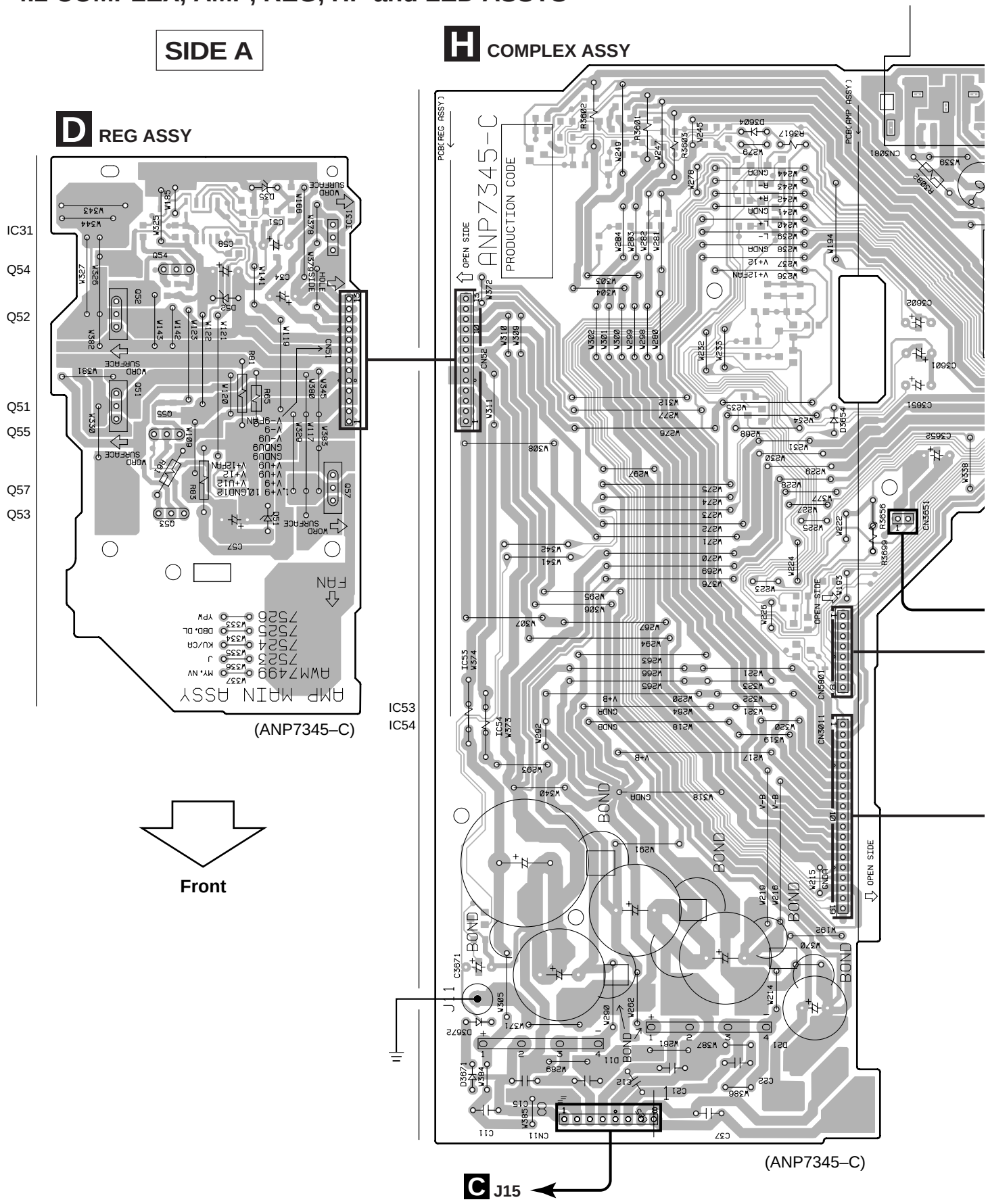
(ANP7345–C)

A AC IN ASSY

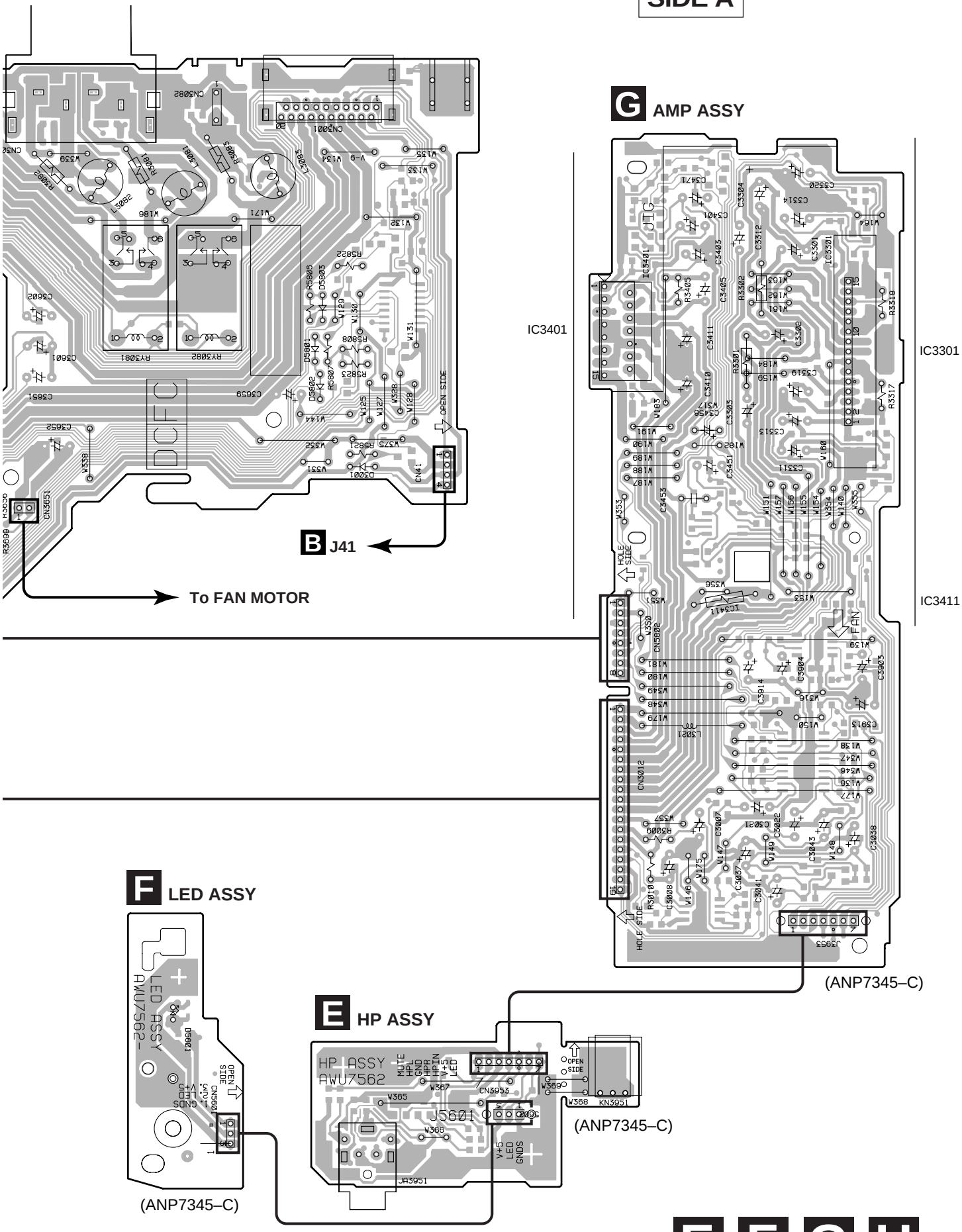


(ANP7345–C)

4.2 COMPLEX, AMP, REG, HP and LED ASSYS

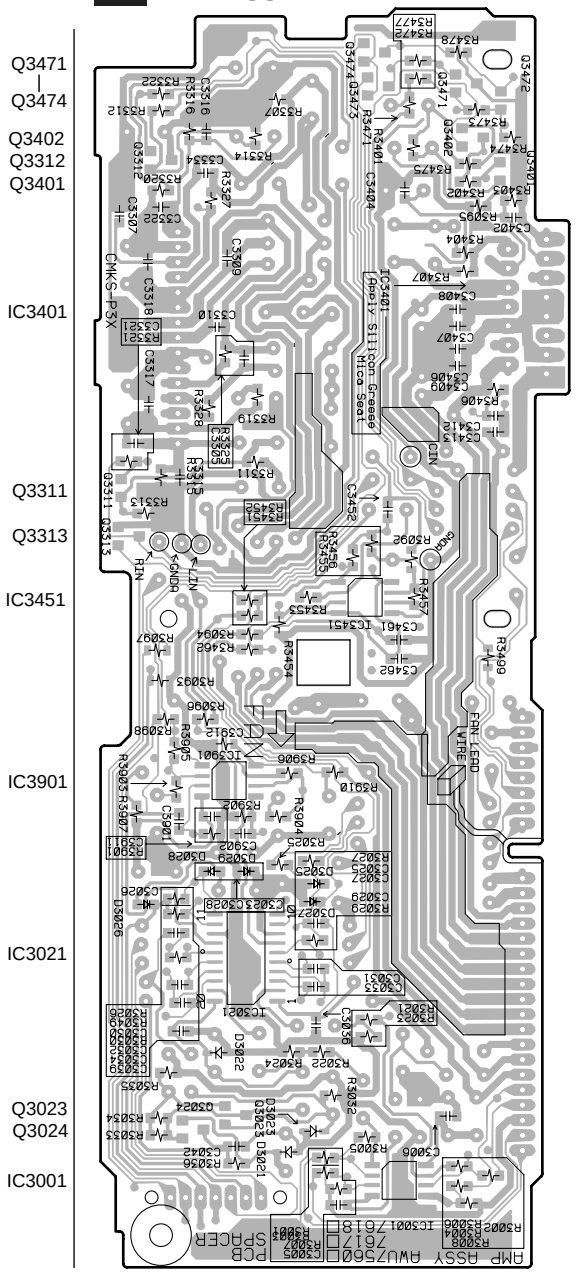


SIDE A


G AMP ASSY
IC3401
IC3301
IC3411
B J41
To FAN MOTOR
(ANP7345–C)
F LED ASSY
LED ASSY
AWU7562-
(ANP7345–C)
E HP ASSY
HP ASSY
AWU7562
(ANP7345–C)

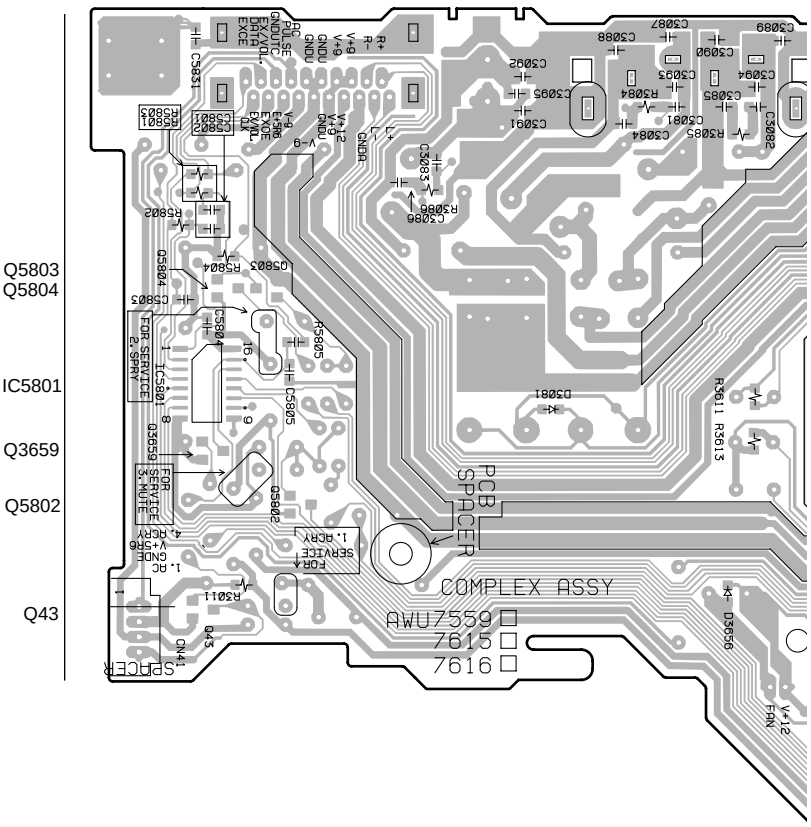
SIDE B

G AMP ASSY



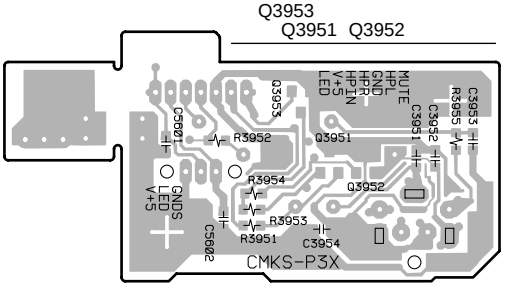
(ANP7345–C)

H COMPLEX ASSY



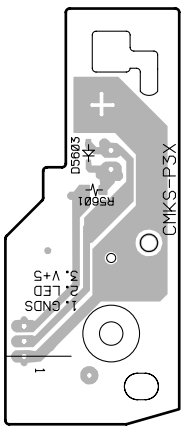
Front

E HP ASSY



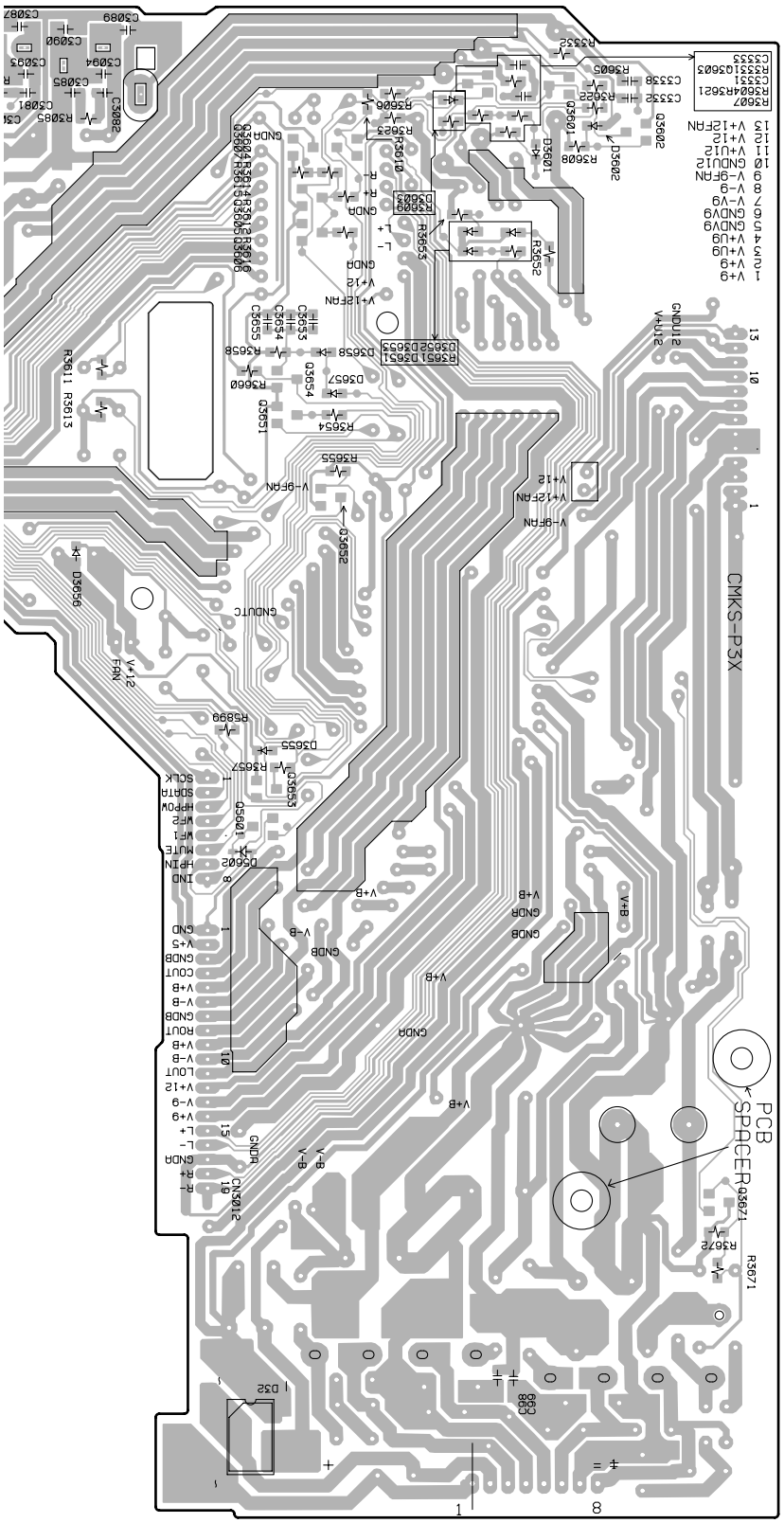
(ANP7345–C)

F LED ASSY



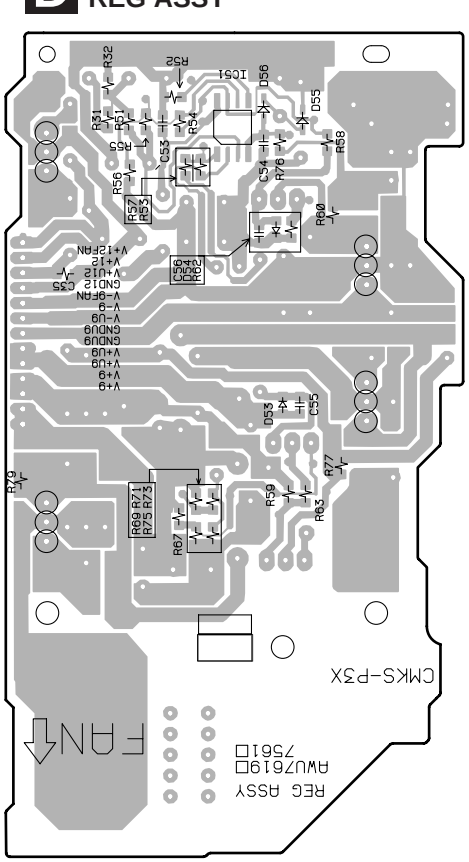
(ANP7345–C)

SIDE B



(ANP7345–C)

D REG ASSY



(ANP7345–C)

Front

5. PCB PARTS LIST

NOTES :
- *Parts marked by "* NSP *" are generally unavailable because they are not in our Master Spare Parts List.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex. 1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).

560 Ω → 56 × 10 [1] → 561 ..... RD1/4PU 5 6 1 J
47k Ω → 47 × 10 [3] → 473 ..... RD1/4PU 4 7 3 J
0.5 Ω → R50 ..... RN2H R 5 0 K
1 Ω → 1R0 ..... RS1P 1 R 0 K

Ex. 2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 × 10 [1] → 5621 ..... RN1/4PC 5 6 2 1 F

■ LIST OF WHOLE PCB ASSEMBLIES

Mark	Symbol and Description	Part No.			Remarks
		MYXJ type	NVXJ type	KUXJ/CA type	
NSP	AMP MAIN Assy	AWM7499	AWM7499	AWM7524	
	├ AC IN Assy	AWU7556	AWU7556	AWU7609	
	├ PRIMARY Assy	AWU7557	AWU7557	AWU7658	
	├ SECONDRY Assy	AWU7558	AWU7558	AWU7614	∗1
	├ COMPLEX Assy	AWU7559	AWU7559	AWU7616	
	├ AMP Assy	AWU7560	AWU7560	AWU7618	
	├ REG Assy	AWU7561	AWU7561	AWU7619	∗2
	├ LED Assy	AWU7562	AWU7562	AWU7562	
	└ HP Assy	AWU7563	AWU7563	AWU7563	

∗1: Although AWU7558 and AWU7614 are different in part number, they have same service parts.
∗2: Although AWU7561 and AWU7619 are different in part number, they have same service parts.

■ CONTRAST OF PCB ASSEMBLIES

A AC IN Assy

AWU7556 and AWU7609 are constructed the same except for the following:

Mark	Symbol and Description	Part No.		Remarks
		AWU7556	AWU7609	
⚠	L1	ATF–151	Not used	
⚠	C2 (0.01μF/275V)	ACE7013	Not used	
⚠	R1	Not used	RCN1080	
⚠	AN1 AC Inlet 1P	BKP1046	AKP7032	

B PRIMARY Assy

AWU7557 and AWU7658 are constructed the same except for the following:

Mark	Symbol and Description	Part No.		Remarks
		AWU7557	AWU7658	
⚠	T2	ATT7050	ATT7049	
⚠	C42	CEAT222M16	CEAT102M16	∗

∗: As for the AWU7557, the design change is done like the AWU7658.

G AMP Assy

AWU7560 and AWU7618 are constructed the same except for the following:

Mark	Symbol and Description	Part No.		Remarks
		AWU7560	AWU7618	
	L3021	LAU560J	Not used	*

*: As for the AWU7560, the design change is done like the AWU7618.

H COMPLEX Assy

AWU7559 and AWU7616 are constructed the same except for the following:

Mark	Symbol and Description	Part No.		Remarks
		AWU7559	AWU7616	
⚠	IC53 (5A/125V)	Not used	AKE7019	
	D3001	1SS133	1SS355	*
	L3021	Not used	LAU560J	*
	L3801–L3803	ATH–059	ATH–133	
	R3801–R3803	RD1/4LMF101J	RD1/4LMF100J	
	R5699	Not used	RS1/10S0R0J	*
	CN3801	AKE1025	AKE7065	

*: As for the AWU7559, the design change is done like the AWU7616.

■ PCB PARTS LIST FOR MYXJ TYPE

Mark	No.	Description	Part No.
	A AC IN ASSY		
	COILS AND FILTERS		
⚠	L1		ATF–151
	CAPACITORS		
⚠	C2 (0.01µF/275V)		ACE7013
	OTHERS		
⚠	CN2	PLUG 4P	AKM7055
	H101, H102	FUSE CLIP	AKR7001
⚠	AN1	AC INLET 1P	BKP1046
	B PRIMARY ASSY		
	SEMICONDUCTORS		
⚠	IC41		NJM78M56FA
	Q41		2SC2412K
	Q42		DTA124EK
	D42, D44		1SS355
⚠	D41		S1WB(A)60SD
	TRANSFORMER		
⚠	T2		ATT7050
	RELAY		
⚠	RY1		ASR7018
	CAPACITORS		
⚠	C1, C3 (0.01µF/275V)		ACE7013
	C44		CEAT101M10
⚠	C42		CEAT222M16
	C41		CQMBA473J50
	RESISTORS		
	All Resistors		RS1/10S □□□J
	OTHERS		
	41	4P CABLE HOLDER	51048–0400
⚠	CN3	SOCKET 4P	AKP7132
⚠	CN4	2P-VH CONNECTOR	B2P3–VH
	J41	4P JUMPER WIRE	D20PYY0415E
	C SECONDRY ASSY		
	SEMICONDUCTORS		
⚠	IC15 (2.5A/125V)		AEK7014
⚠	IC13, IC14 (7A/125V)		AEK7021
⚠	IC11, IC12 (10A/125V)		AEK7022

Mark	No.	Description	Part No.
OTHERS			
	15	8P CABLE HOLDER	51052–0800
	J15	JUMPER WIRE	D25XYY0815E

H COMPLEX ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC5801		BU4094BCF
	Q3601–Q3603		2SA1037K
	Q3604–Q3606		2SC2412K
	Q3607, Q3652		2SD2114K
	Q3651, Q5802, Q5804		DTA124EK
	Q3653		DTA124TK
	Q3654, Q3659, Q43		DTC124EK
	Q5601, Q5803		DTC143EK
	D3001, D3604		1SS133
	D3081, D3601–D3603, D3651–D3653		1SS355
	D3655–D3658		1SS355
⚠	D11, D21		D3SBA20(B)
⚠	D32		S1WB(A)60SD
	D3654		S5688G

COILS AND FILTERS

Mark	No.	Description	Part No.
	L3081–L3083	(5.3µH)	ATH–059

SWITCHES AND RELAYS

Mark	No.	Description	Part No.
	RY3081, RY3082		ASR7007

CAPACITORS

Mark	No.	Description	Part No.
⚠	C13	(18000µF/25V)	ACH7099
	C5802, C5803, C5805		CCSQCH221J50
	C3602		CEAT100M50
	C3659		CEAT101M10
	C3651		CEAT101M16
	C3601		CEAT221M6R3
⚠	C36		CEAT222M25
	C3652		CEAT470M25
⚠	C14		CEAT682M25
	C3087, C3089, C3091, C3093–C3095		CKSQYB102K50
	C3088, C3090, C3092		CKSQYB103K50
	C5801		CKSQYB472K50
	C3331–C3333, C3338		CKSQYB473K50
	C5804		CKSQYF104Z25
	C3081–C3086		CKSQYF473Z50
⚠	C21, C22		CQMA223K2E
	C11, C12, C37		CQMBA473J50
⚠	C23, C24	(4700µ/35V)	RCH1107

RESISTORS

Mark	No.	Description	Part No.
	R3601–R3603	(0.1Ω, 1W)	ACN7100
	R3081–R3083		RD1/4LMF101J
	R3617, R5821, R5822		RD1/4PU103J
	R5807		RD1/4PU1R0J
	R5806		RD1/4PU222J
	R5808		RD1/4PU223J
	R3699		RD1/4PU330J
	R5823		RD1/4PU472J
	Other Resistors		RS1/10S □□□J

OTHERS

Mark	No.	Description	Part No.
	CN3082	2P CONNECTOR	5569–02A1
	3081	SPEAKER TERMINAL 4-P	AKE1025
	CN3001	20P SOCKET	AKP7129
	CN52	13P PLUG	KM200TA13
	CN3011	19P PLUG	KM200TA19
	CN5801	8P PLUG	KM200TA8
	CN11	L-CONNECTOR (8P)	KPD8L
	3082	SCREW PLATE	VNE1948

G AMP ASSY

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC3001, IC3451, IC3901		BA4558F–HT
	IC3021		M62421FP
⚠	IC3301		STK402–040
⚠	IC3401		TDA7294V
	Q3023, Q3024		2SC2412K
	Q3311, Q3312, Q3401, Q3471, Q3472		2SD2114K
	Q3313, Q3402, Q3473, Q3474		DTA124EK
	D3021		UDZS10B

COILS AND FILTERS

Mark	No.	Description	Part No.
	L3021		LAU560J

CAPACITORS

Mark	No.	Description	Part No.
	C3321, C3322		CCSQCH221J50
	C3025, C3027		CCSQCH470J50
	C3317, C3318		CCSQCJ3R0C50
	C3315, C3316		CCSQSL471J50
	C3313, C3314		CEANP4R7M50
	C3038, C3041, C3471		CEAT100M50
	C3007, C3008, C3043, C3913		CEAT101M10
	C3303, C3304		CEAT101M35
	C3405, C3410, C3411		CEAT220M50
	C3037		CEAT221M6R3
	C3301, C3302, C3403		CEAT330M50
	C3021, C3022		CEAT3R3M50
	C3451		CEAT470M16
	C3401		CEAT4R7M50
	C3311, C3312		CECAR47M50
	C3914		CEJQ101M10
	C3319, C3320		CEJQ330M10
	C3903, C3904		CEJQ470M16
	C3402		CKSQYB102K50
	C3005, C3006, C3028, C3036, C3039		CKSQYB103K50
	C3305, C3309, C3310, C3334, C3404		CKSQYB103K50
	C3406, C3407, C3461, C3462		CKSQYB103K50
	C3033, C3034		CKSQYB223K25
	C3029, C3030		CKSQYB333K25
	C3452		CKSQYB333K50

Mark	No.	Description	Part No.
	C3412, C3413		CKSQYB473K50
	C3031, C3032		CKSQYB474K16
	C3023, C3911, C3912		CKSQYF104Z25
	C3026, C3901, C3902		CKSQYF105Z16
	C3408, C3409		CKSQYF473Z50
	C3453		CQMBA683J50
	RESISTORS		
	R3301, R3302		RD1/4LMF101J
	R3317, R3318, R3405		RD1/4PU563J
	R3009, R3010		RD1/4PU820J
	R3001–R3008		RS1/10S1202F
	Other Resistors		RS1/10S □□□J
	OTHERS		
	3953	7P CABLE HOLDER	51048–0700
	J3953	JUMPER WIRE	D20PYY0710E
	CN3012	19P SOCKET	KP200TA19L
	CN5802	8P SOCKET	KP200TA8L

D REG ASSY

Mark	No.	Description	Part No.
	SEMICONDUCTORS		
	IC51		BA4558F–HT
⚠	IC31		NJM7812FA
	Q54		2SA933S
	Q53		2SB1237X
	Q55		2SC1740S
⚠	Q51, Q52		2SD2395
	Q57		2SD2395
	D53, D54		1SS355
	D35		MTZJ6.8B
	D55, D56		UDZS5.1B
	CAPACITORS		
	C34		CEAT100M50
	C51, C57, C58		CEAT330M50
	C53		CKSQYB103K50
	C56		CKSQYB104K16
	C35, C54		CKSQYB473K25
	C55		CKSQYB474K16
	RESISTORS		
⚠	R61		RFA1/4PS100J
⚠	R65		RFA1/4PS151J
⚠	R81, R83		RS1LMFR22J
	Other Resistors		RS1/10S □□□J
	OTHERS		
	CN51	13P SOCKET	KP200TA13L

F LED ASSY

Mark	No.	Description	Part No.
	SEMICONDUCTORS		
	D5601		SLR–343VC
	RESISTORS		
	All Resistors		RS1/10S □□□J

E HP ASSY

Mark	No.	Description	Part No.
	SEMICONDUCTORS		
	Q3951, Q3952		2SD2114K
	Q3953		DTA124EK
	CAPACITORS		
	C3951–C3954		CKSQYB103K50
	C5601		CKSQYF104Z25
	C5602		CKSQYF105Z16
	RESISTORS		
	All Resistors		RS1/10S □□□J
	OTHERS		
	5602	3P CABLE HOLDER	51048–0300
	JA3951	JACK	AKN7013
	J5601	3P JUMPER WIRE	D20PYY0305E
	KN3951	EARTH METAL FITTING	VNF1084

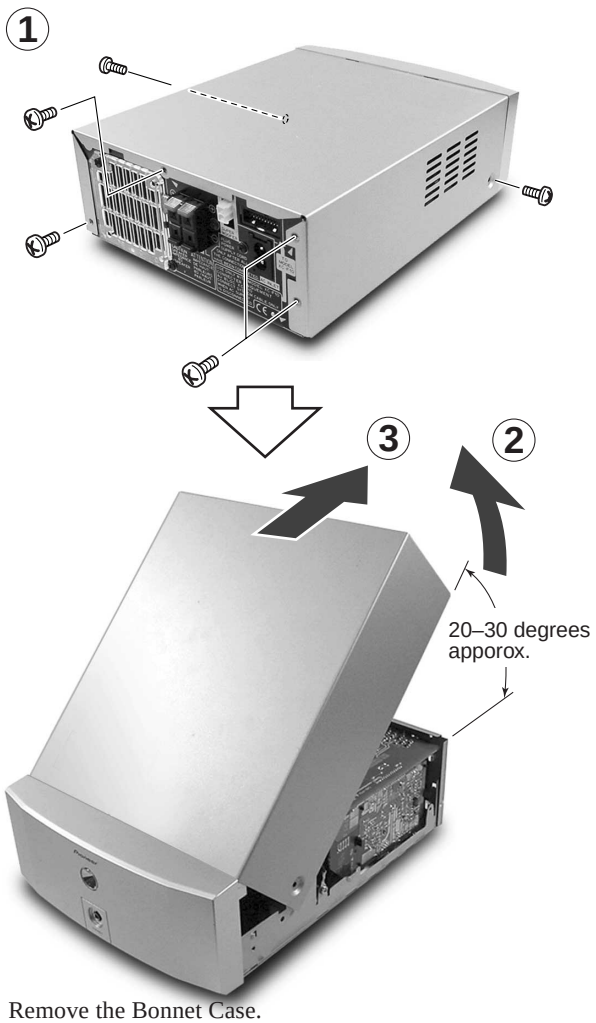
6. ADJUSTMENT

There is no information to be shown in this chapter.

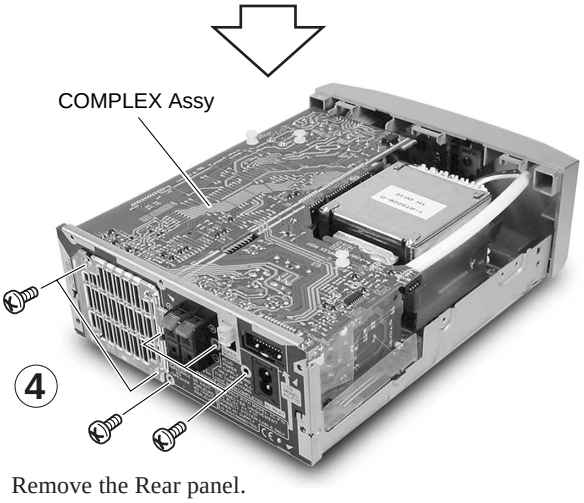
7. GENERAL INFOMATION

7.1 DIAGNOSIS

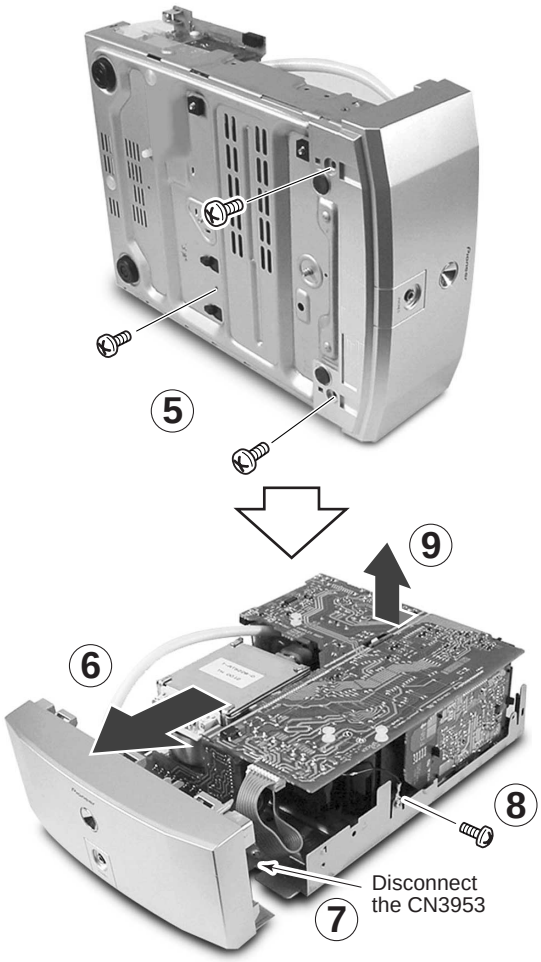
7.1.1 DISASSEMBLY



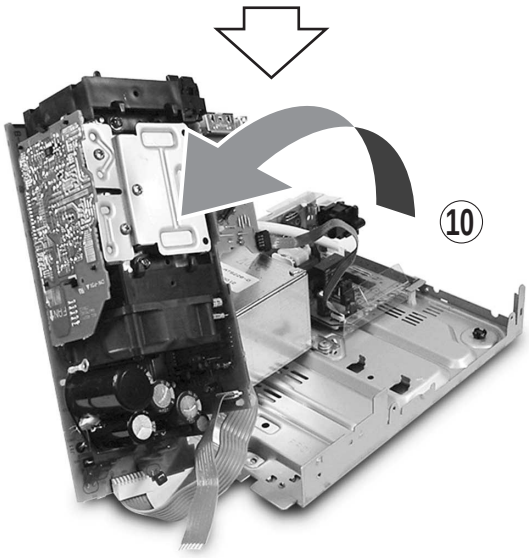
Remove the Bonnet Case.



Remove the Rear panel.



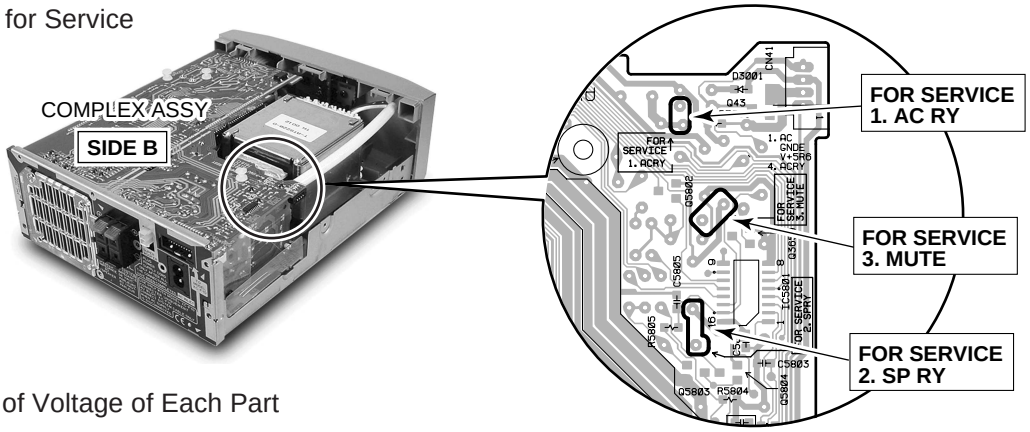
Remove the Front Panel.



7.1.2 SINGLE OPERATION METHOD

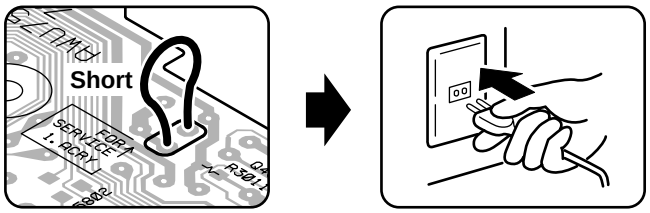
■ Voltage of each part and method of diagnosing each IC

● Test Point for Service



● Diagnosis of Voltage of Each Part

① **FOR SERVICE 1. AC RY** point of the COMPLEX Assy is short-circuited (AC RELAY ON), and the AC power code is inserted in the power supply outlet.



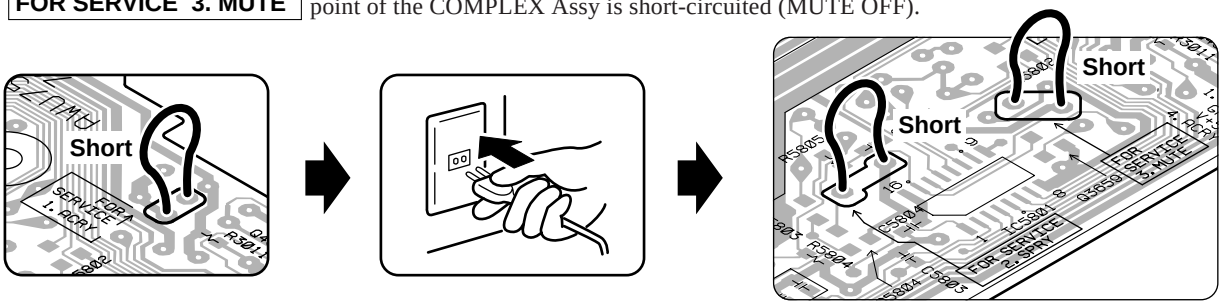
② The voltage of each part is checked.
Refer to next page (diagnosis point).

● Diagnosis of Each IC

① **FOR SERVICE 1. AC RY** point of the COMPLEX Assy is short-circuited (AC RELAY ON), and the AC power code is inserted in the power supply outlet.

② **FOR SERVICE 2. SPRY** point of the COMPLEX Assy is short-circuited (SP RELAY ON).

③ **FOR SERVICE 3. MUTE** point of the COMPLEX Assy is short-circuited (MUTE OFF).



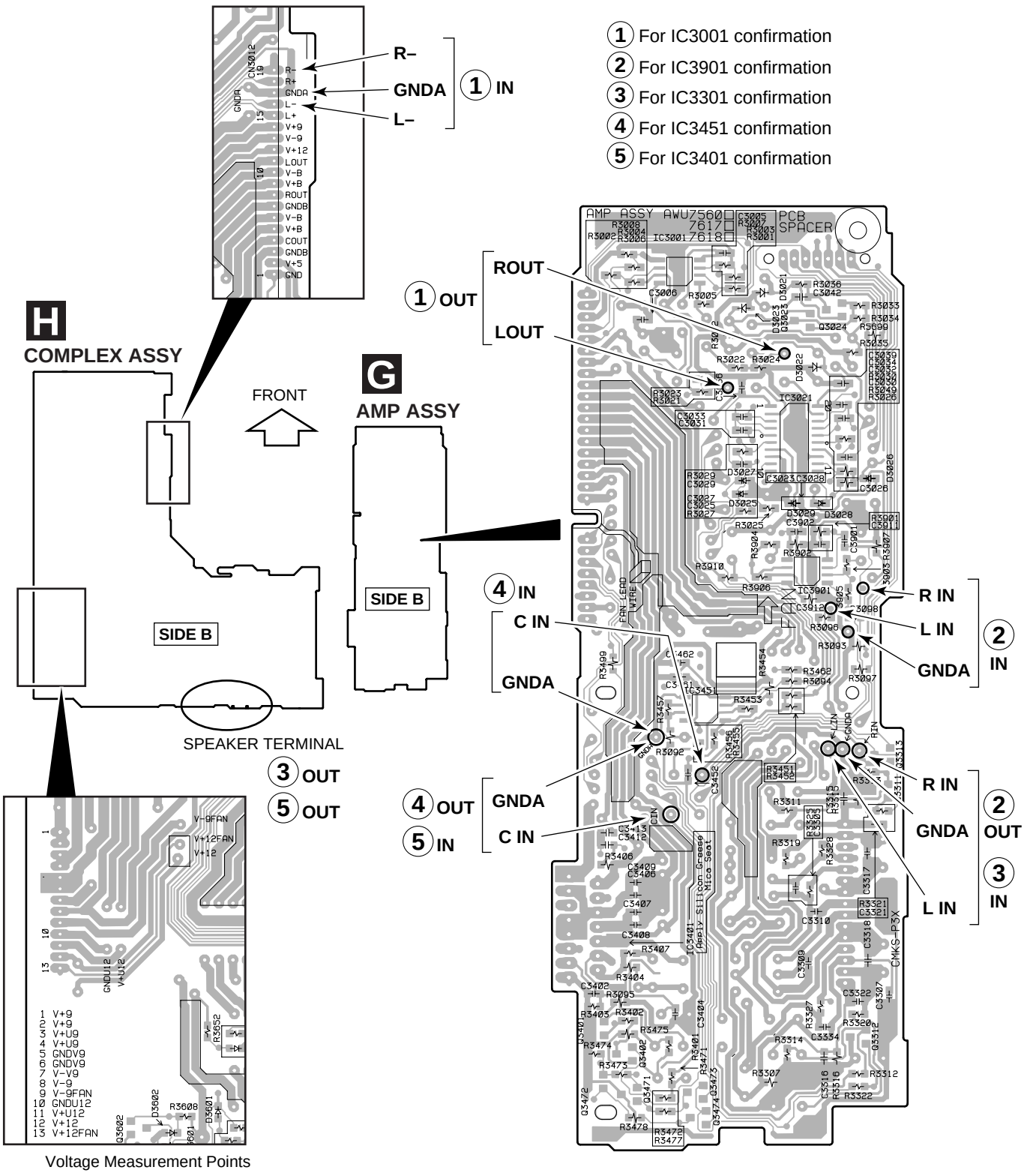
④ The AUDIO signal (About 1kHz) is input to the input side of each IC, and the output is confirmed.
Refer to next page (diagnosis point).

OP amplifier (AMP Assy) . . . . . IC3001, IC3901, and IC3451
Amplifier (AMP Assy) . . . . . IC3301 and IC3401

● Diagnosis of IC3021

Note: The single operation confirmation cannot be done, because IC3021(E-VOL) is controlled with the microcomputer of Stereo CD tuner (XC-F10).

● Diagnosis Points



Voltage Measurement Points

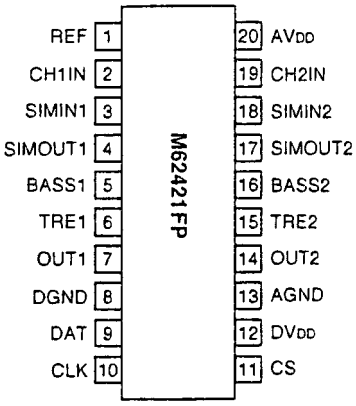
- The information shown in the list is basic information and may not correspond exactly to that shown in the schematic diagrams.

7.2 IC

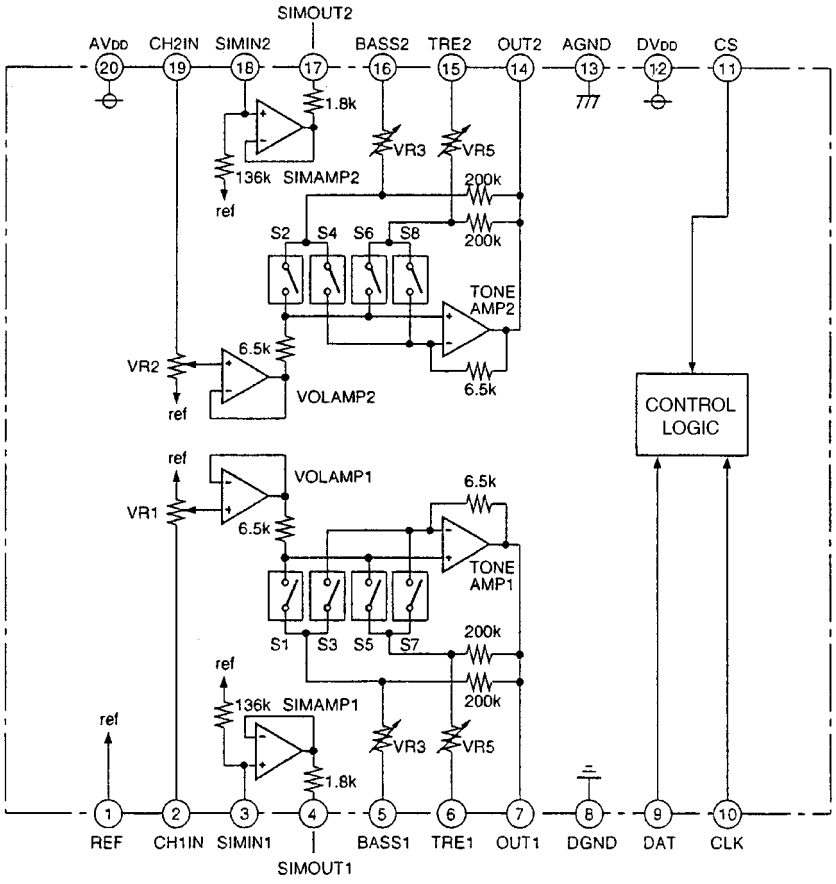
■ M62421FP (IC3021: AMP ASSY)

● Digital Sound Controller built-in Tone Control

● Pin Assignment (Top View)



● Block Diagram



● Pin Function

No.	Name	I/O	Description
1	REF	I	Standard voltage input terminal
2	CH1IN	I	Signal input terminal for channel 1
3	SIMIN1	I	Capacitor installation terminal for Simulated inductor 1
4	SIMOUT1	O	
5	BASS1	I	Capacitor installation terminal for Bass adjustment of channel 1 side
6	TRE1	I	Capacitor installation terminal for Treble adjustment of channel 1 side
7	OUT1	O	Signal output terminal after volume is controlled of channel 1 side
8	DGND	—	Ground terminal for digital circuit
9	DAT	I	Input/Output terminal for control data
10	CLK	I	Clock input terminal for serial data transfer

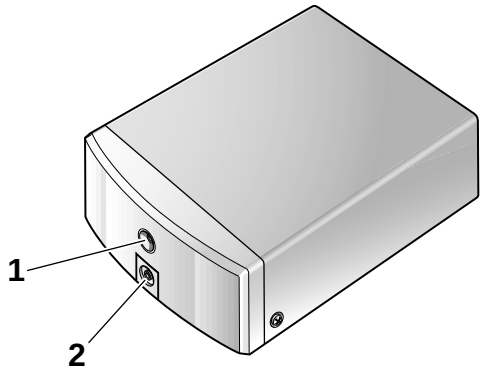
No.	Name	I/O	Description
11	CS	I	Chip select signal terminal
12	DVDD	—	Power supply terminal for digital circuit
13	AGND	—	Ground terminal for analog circuit
14	OUT2	O	Signal output terminal after volume is controlled of channel 2 side
15	TRE2	I	Capacitor installation terminal for Treble adjustment of channel 2 side
16	BASS2	I	Capacitor installation terminal for Bass adjustment of channel 2 side
17	SIMOUT2	O	Capacitor installation terminal for Simulated inductor 2
18	SIMIN2	I	
19	CH2IN	I	Signal input terminal for channel 2
20	AVDD	—	Power supply terminal for analog circuit

8. PANEL FACILITIES AND SPECIFICATIONS

8.1 PANEL FACILITIES

1 **Power indicator** – lights when the system is on

2 **Headphone jack** – plug in a pair of headphones for private listening (the sound from the speakers is muted when headphones are plugged in)



8.2 SPECIFICATIONS

For MYXJ Type

Continuous Power Satellite (RMS) ..... 30 W + 30 W (3 kHz, THD 10%, 8 Ω)
Continuous Power Subwoofer (RMS) ..... 50 W (70 Hz, THD 10%, 4 Ω)
Continuous Power Satellite (DIN) ..... 23 W + 23 W (3 kHz, THD 1%, 8 Ω)
Continuous Power Subwoofer (DIN) ..... 43 W (70 Hz, THD 1%, 4 Ω)
Power Requirements ..... AC 220-230 V, 50/60 Hz
Power Consumption (ON mode) ..... 127 W
Power Consumption (Standby mode) ..... 0.9 W
Dimensions ..... 190 (W) × 80 (H) × 267 (D) mm
Weight ..... 4.0 kg

• Above specifications are for when the power supply is 230 V.

For NVXJ Type

Continuous Power (RMS)
Satellite ..... 30 W + 30 W (3 kHz, THD 10%, 8 W)
Subwoofer ..... 50 W (70 Hz, THD 10%, 4 W)
Continuous Power (DIN)
Satellite ..... 23 W + 23 W (3 kHz, THD 1%, 8 W)
Subwoofer ..... 43 W (70 Hz, THD 1%, 4 W)

Power Requirements ..... AC 230 V, 50/60 Hz (UK model)
..... AC 240 V, 50/60 Hz (Non-UK model)
Power Consumption (ON mode) ..... 127 W (UK model)
..... 110 W (Non-UK model)
Power Consumption (Standby mode) ..... 0.9 W
Dimensions ..... 190 (W) x 80 (H) x 267 (D) mm
Weight ..... 4.0 kg

For KUXJ/CA Type

Output for Satellite Speakers

Continuous average power output of 20 watts* per channel, min., at 8 ohms, from 200 Hz to 20,000 Hz with no more than 0.9 % total harmonic distortion.**

Output for Subwoofer Speaker

Continuous average power output of 30 watts* min., at 4 ohms, from 40 Hz to 200 Hz with no more than 0.9 % total harmonic distortion.**

* *Measured pursuant to the Federal Trade Commission's Trade Regulation rule on Power Output Claims for Amplifiers.*

** *Measured by Audio Spectrum Analyzer.*

Continuous Power Satellite (RMS) ..... 30 W + 30 W (3 kHz, THD 10%, 8 Ω)
Continuous Power Subwoofer (RMS) ..... 50 W (70 Hz, THD 10%, 4 Ω)
Power Requirements ..... AC 120 V, 60 Hz
Power Consumption (ON mode) ..... 125 W, 160 VA
Power Consumption (Standby mode) ..... 0.9 W
Dimensions ..... 190 (W) × 80 (H) × 267 (D) mm (7 1/2(W) x 3 1/8(H) x 10 1/2(D) in.)
Weight ..... 4.0 kg (8 lb. 13 oz.)

Accessories

Remote control unit 1
Stand A 1
Stand B 1
Paper pattern 1
System cable 1
FM wire antenna 1
AM loop antenna 1
Lithium battery (CR2025) 1
AC power cord 1
Operating instructions 1
Warranty card 1

NOTE: *Specifications and design subject to possible modification without notice, due to improvements.*